CHAPTER 3

RATIONALITY AND SCIENCE IN POSTCOLONIAL ORIENT: A STUDY OF THE CIRCLE OF REASON

You are the one in command, in your capacity as a rational being. A new form of slavery is invented, namely, being slave to oneself, or to pure “reason” (Deleuze and Guattari, 1987: 130).

This statement of Deleuze and Guattari shows when “reason” becomes religion it causes tragedies as it happens in Amitav Ghosh’s The Circle of Reason. Balaram’s obsession with phrenology and carbolic acid becomes a kind of religious ritual and leads him to tragic situations. Here “reason” becomes the biggest irrationality in his life that becomes a representative of Oriental life in general. The depiction of Balaram and Alu as representatives of India in particular and the Orient in general brings in the discourse of Orientalism. Here he misses the opportunity to depict the Oriental subject as rational being rather he subscribes to the Orientalist idea that the “Oriental is irrational, depraved (fallen), childlike, “different”; thus the European is rational, virtuous, mature, normal” (Said: 40).

The two main characters Balaram and Alu in the novel fail to understand the rational use of even science that attests to the Orientalist idea of incapability of the Orientals to handle science and technology. Deleuze and Guattari hints at how even science can become unscientific and irrational when they say:

It is not that the ambulant sciences are more saturated with irrational procedures, with mystery and magic. They only get that way when they fall into abeyance. And the royal sciences, for their part, also surround themselves with much priestliness and magic. Rather, what becomes
apparent in the rivalry between the two models is that the ambulant or
nomad sciences do not destine science to take on an autonomous power, or
even to have an autonomous development (Deleuze and Guattari, 1987:
372).

Clare Chambers tries to defend Amitav Ghosh’ depiction of Indian characters
against this criticism by saying that

Reason’ is of course a contested term, which has been interpreted in vastly
different ways by philosophers as diverse as Plato and Chomsky. It is also
important to be aware that there is a plurality of concepts of ‘reason’. In
India, for example, discourses of reason and logic long predated British
expansion into the subcontinent and were not confined only to the Hindu
tradition (Chambers: 38).

However, Joseph Raz’s definition of Reason shows that Indian characters depicted
in the novel lack the basic reasoning power. He defines reason as:

Reason is inherently normative. That is its central characteristic. Therefore,
the accounts of normativity and of reason and rationality, though not
identical, are inter-related. An account of rationality is an account of the
capacity to perceive reasons and to conform to them, and of different forms
of conforming to reasons, and their appropriateness in different contexts.
To explain the capacity to conform to reason the account must explain the
possibility of error, failure to perceive reasons correctly, and of failure to
respond to them once perceived. An account of irrationality is an account
of some of the ways of failing to conform to reason, those which render one,
or one’s behaviour, or emotions, etc. irrational. The core idea is that rationality is the ability to realise the normative significance of the normative features of the world, and the ability to respond accordingly (Raz: 355).

Characters from India and al-Ghazira depicted in the novel lack the “ability to respond accordingly”. Instead of looking into “reason” and “rationality” as a strategy for survival Ghosh in this novel categorizes reason as Western reason and Hindu reason. He tries to view Western reason as a linear association of thoughts and Hindu view of reason as cyclical, however science as a part of nature and reason as a strategy for survival cannot be categorized as Western and Hindu. Balaram and Alu do not represent the entire Orient or India rather they are products of orthodox society that trains its members to look at everything in religious terms. In such a society, the official philosophy is populated by “bureaucrats of pure reason” who speak in “the shadow of the despot” and are in historical complicity with the State (Deleuze: 148) as happened in case of Vedic philosophy in India. They invent “a properly spiritual... absolute State that ... effectively functions in the mind” and project their discourse as a sovereign judgment, of stable subjectivity legislated by “good” sense, of rocklike identity, “universal” truth. “Thus the exercise of their thought is in conformity with the aims of the real State, with the dominant significations, and with the requirements of the established order” (Deleuze and Parnet: 20).

This novel’s location in Orientalist discourse and Orientalist discourse’s location in this novel is clear from the fact that a novel dealing with scientists like Pasture, Joliot-Curie, C. V. Raman, Meghnad Saha and some others is divided into sections- Satwa, Rajas and Tamas taken from Hindu scriptures-- the sources of pseudo-sciences like phrenology.
Lipner talks about the meaning and significance of these concepts in Hindu life when he says:

sattva [this spelling in original] [...I produce[s] experiences and dispositions which we characterise as serenity, peace, compassion, benevolence, kindness, forgiveness, awareness, intelligence, insight, clarity of mind, etc. Likewise, rajas produces passionate mental and moral activity (a mercurial temperament, volubility, wrath, lust, etc.) [...], while the modifications of tamas give rise to such things as sloth, stupidity, mental confusion, cowardice, and so on (Lipner: 243).

These concepts as a part of socio-cultural and philosophical discourses are used for discriminatory practices and there projection as medical discourses further naturalizes the discrimination. Even food items are categorized as sattwik food, rajsi food and tamsik food that are supposed to bring out change in the social behaviour of the people who eat different foods and therefore are projected as belonging to different castes. Priestly caste is identified with sattwa, warrior caste with rajas and untouchables with tamas. This discourse is completely irrational and promotes caste-based discrimination. Apparently, the novel seems to start a debate about modernization of India and focuses on issues of caste, science, secularism etc. however, a socio-cultural reading of the novel reveals that Amitav Ghosh uses it to show how movement of Alu to the level of untouchables brings out tragedy. Furthermore, the author’s treatment of all these issues shows Indians as irrational, unscientific and incapable managing life on their own. The way Ghosh tries to abolish caste is a matter of fancy and irrationality and caste cannot be abolished in the real life of India.
The author takes the help of phrenology to abolish caste of Alu, an upper-caste by birth and converts him to a weaver caste, a lower caste. He forwards the argument:

It was the lump on his forehead beneath the hair-line. It had taken him all these years to discover its meaning. Spurzheim was wrong. The Mechanical sense was not on the pterion; it was not a mere propensity, to be lumped with Alimentiveness and Acquisitiveness. The Mechanical was the highest of all organs – the organ that made a mere two-legged creature Man, the seat of Reason. Where else could that organ be but on the crown of the forehead?

Once the organ was identified everything else became blindingly clear – Alu’s huge hands, his squat stocky frame. Even the mysterious attraction that drew him to Shombhu Debnath’s home. How could he cheat his destiny?

As soon as he knew the truth he had smuggled his instruments out of his house, under his clothes, and gone to Shombhu Debnath’s house. For months he had spent his evenings measuring Shombhu Debnath’s looms, the distance between the shuttle strings and the weaver’s hands, between the pedals and the seat. He had worked until there was no room left for error. The calculations had taken even longer. When at last it was all done, trembling with apprehension, he had matched Alu’s measurements with his calculations.
His intuition was proved right in every detail: Alu’s body, his hands, his legs, his arms, not to speak of the Organ, corresponded exactly to his calculations of the proportions ideal for a weaver (Ghosh: 58-59).

Here the author instead of questioning the scientific nature of phrenology affirms it that can become a pretext to prove Indian astrology as a science. Like phrenology, Indian astrology also determines varna another name for caste taking into account location of planets at the time of birth however it cannot abolish caste because a person born in a lower caste family having “varna: Brahmin” in the astrological chart will never be treated as a Brahmin.

A large section of upper-caste Indians have their horoscopes prepared by experts moreover, many of them are given castes other than they are born in, however none of them loses the caste of their birth. Origin of caste has nothing to do with astrology or phrenology rather economic and social exploitation is the root cause of caste-based discrimination. The author himself from an upper-caste society does not opt for practical solutions based on social and economic equality as suggested by Jyotirao Phule, B. R. Ambedkar and many others, rather he takes up phrenology, which is only a substitute for astrology as a solution to eradicate caste-based discrimination. Through Balaram, Alu, Bhudeb Roy he depicts Indians as orientalized subjects despite the fact that he had the example of Jyotirao Phule, B. R. Ambedkar and many others whose views are far more rational than astrology or phrenology.

Many critics appreciate Ghosh for producing a critique of Western science and western reason despite the fact that natural science is same everywhere and reason depends
of circumstances not on East-West binaries. Claire Chambers is one such critic who looks at this novel romantically when he says:

In a sense, Balaram’s attitude towards science evinces a hybridizing tendency, and in this respect, he unwittingly challenges western scientific discourse. Balaram receives many very different scientific notions originating from the West with the same almost indiscriminate rapture; his admiration for discredited sciences such as phrenology and criminology indicates the heterogeneous and socially determined tendencies of western scientific discourse (Chambers: 43).

However, instead of challenging “socially determined tendencies of western scientific discourse” the author only confirms the Orientalist idea of Orientals as propounded by a renowned Orientalist H. A. R. Gibb:

[I]t is plain, I think, and admitted that the conception of the Unseen is much more immediate and real to the Oriental than to the western peoples. The “large modifying elements which seem, from time to time, almost to upset the general law” do not upset it, nor do they upset the other equally sweeping and general laws governing the Oriental mind. The essential difference in the Oriental mind is not credulity as to unseen things, but inability to construct a system as to seen things (Said: 276-277).

The character of Balaram confirms the Orientalist notion of “inability to construct a system as to seen things” in his obsession of carbolic acid and phrenology. In this novel the author gives Balaram two choices – on the one side lies natural sciences represented by Joliot-Curie, Meghnad Saha, C. V. Raman etc. and on the other side lie practices like
phrenology that were developed and revered as natural sciences just only to establish and validate socio-cultural and economic hegemony of certain classes over the rest. However, through Balaram, Ghosh criticizes the natural sciences represented by scientists like Joliot-Curie and glorifies the abstract philosophies of phrenology and criminology posing as natural science. He points out the criminal use of science but keeps quite on inherent criminality and violence of abstract philosophies and religious discourses.

Balaram turns away from natural sciences because he becomes aware of violence caused by the use of science and technology for instance, death and destruction caused by nuclear explosion at Hiroshima. However, he deliberately ignores the violence caused with the help of phrenology by enacting laws that criminalize innocent people; furthermore, he depicts it in very positive terms when he says, “Wasn’t that why Lombroso was so celebrated – for demonstrating the hereditary nature of character? Wasn’t that why the American laws of 1915 prescribing sterilization for confirmed criminals were enacted” (Ghosh: 12)? The basic idea behind phrenology is that the “personality can be detected through the relative size of the mental organs in the brain, is easy for an untrained mind to grasp, and phrenologists often boasted that anyone could be taught their system in a day” (Shapin: 146). The discourse of phrenology, unlike psychiatric and medical sciences is a social discourse that is often used to unleash the violence lying in the individual personalities and that too legally. This feature made this practice so popular that “Combe’s The Constitution of Man generated more ‘intellectual and emotional heat’ in its day than did Darwin’s The Origin of Species (Cooter: 10). Phrenology in the West was initially developed to challenge the notion that class based power structure was divinely ordained it did so by establishing a hierarchy among different functions of the brain. It is evident
from the fact that most of the pioneers of phrenology such as Johann George Combe, Franz Joseph Gall, Spurzheim etc. came from underprivileged classes however it was later on appropriated by privileged classes and only the people from underprivileged classes became its victims.

Phrenology became popular among the lower and middle classes of Europe due to expansion of capitalism that considered scientific knowledge an important indication of modernity and required people to come out of medieval religious social structures because it required people for overseas colonialism. They distributed pamphlets and arranged scientific lectures supporting phrenology. The theory of human mind put forward by Combe, a pioneer in the field of phrenology became very popular with people because of its simple principles and wide range of applicability especially in justifying their position as colonizers. Moreover, phrenology infused self-confidence among the lower class Europeans and motivated them to move upward through self-improvement once they are convinced that they have the organs for high intellectual life. Popularity and appeal of phrenology can be judged from the fact that Queen Victoria and Prince Albert invited George Combe to investigate the head structure of their kids.

Phrenology was accepted as a natural science because it equally appealed to doctors as pointed out by McGrew “In 1826, out of 120 members of the Edinburg society an estimated one third were from a medical background” (McGrew: 260). One more reason behind the popularity of phrenology is that it was used to justify the superiority of European races over other races for instance Combe says, “the brain of the Negro ... shows proportionately less Destructiveness, Cautiousness, Self-Esteem, and Firmness, and greater Benevolence, Conscientiousness, and Reflection than the brain of the Native American”
European phrenologists prepared a ranking of races by comparing the shape and size of skull of people belonging to different races and passed judgements on nature of various races for instance E. J. V. Broussais propounded that “the Australian Aboriginals and Maori would never become civilized since they had no cerebral organ for producing great artists” (Staum: 59). Similarly people with “lower foreheads were thought to have underdeveloped organs necessary for success in the arts and sciences” (Staum: 64).

However, phrenology lost its credibility because of violence and irrationality inherent in it, still Ghosh justifies it by using Foucault’s idea that says “a whole set of knowledges that have been disqualified as inadequate to their task or insufficiently elaborated: naive knowledges, located low down on the hierarchy, beneath the required level of cognition or scientifi city” (Foucault: 82). He uses the idea of “subjugated knowledge” to justify Indian mythology, astrology and many such things indirectly by justifying phrenology. Otherwise, scientists do not stop using the formulas and procedures simply because non-Europeans invented them. Ghosh seems to follow Roger Cooter who tries to locate science as a socio-cultural discourse and points out that phrenology was marginalized due to reasons other than scientific when he says, “phrenology’s liminal position between ‘the intellectual boundaries that have come to be erected between science and pseudoscience, nature and culture, science and society’ necessitates are appraisal of these boundaries” (Cooter: 8). A look into the history proves him wrong because phrenology was widely used to criminalize innocent people and it became a cruel practice in the hands of authorities.

Later on phrenology was banned in Europe and America it underwent mutations and continued to influence other academic disciplines. Some of the procedures developed
by phrenologists were appropriated by anthropologists with regard to the study of non-European races and was a tool of racial discrimination without any scientific basis as is evident from the following statement by George Combe who says, “the aboriginal races, with few exceptions, have perished or constantly receded, before the Anglo-Saxon race, and have in no instance either mingled with them as equals, or adopted their manners and civilization” (Gould: 51).

Racism was one of the driving forces behind phrenology is also evident from the fact that Raja Rammohun Roy sent twelve Hindus to England to be examined by Phrenological Society of Edinburgh. The examination of their skulls only confirmed colonial assumption of Hindu’s “love of money [...] [and] secretiveness” (Bates: 232). The statement by Cesare Lombroso one of the pioneer in the field of phrenology further confirms racism in phrenology when he says:

Only we White people [...] have reached the most perfect symmetry of bodily form... Only we [have bestowed]... the human right to life, respect for old age, women, and the weak... Only we have created true nationalism... [and] freedom of thought (Pick, 1989: 126).

Balaram upholds pre-emptive punishment for those marked by criminal stigma as advocated by Lombroso. Lombroso’s criminology is very close to Brahmanical text *Laws of Manu* that discusses the similar subject and criminalizes lower caste people without any rhyme or reason. Balaram is also under the influence of hegemonic discourses the only difference is that Manu is replaced with Lombroso. When Bhudeb Roy consults him to know the future of his newborn son and Balaram predicts:
Bhudeb-babu, I don’t know how to tell you this. I beg that you will not misunderstand. The exhibit, that is to say your son, has distinct protuberances above the asterion and over the temporal muscles above its ears. Furthermore, his mandible and zygomatic arches are already developed to so extraordinary a degree that I can only tell you, with the utmost regret, that he reproduces almost exactly the structure of the Typical Homicidal. With careful nurture you may perhaps be able to hold him down to mere felony, but no further, I fear, no further. Pray, Bhudeb-babu, for I know you believe in prayer, pray that you may not be his first victim (Ghosh-25-26).

Here either the author himself is ignorant or he wants to show Balaram, a childless person ignorant of the fact that the skull of a newborn baby is very soft and it can be molded into any shape when the shape of the skull is not fixed than how one can be so sure about the prediction of future. However, at certain points in the novel the author highlights a few weaknesses in Balaram’s theory. Gopal challenges his theory when he says, “the trouble with people like Balaram was that theories came first and the truth afterwards” (Ghosh: 14). This statement stands true because Balaram could notice Bhudeb Roy’s organ of secretiveness only after he discovers that he is spying on local people and reporting to the police:

Balaram had begun to talk of Bhudeb Roy’s Acquisitive organ, on the upper edge of the front half of the squamous suture, only after he discovered that Bhudeb Roy was taking fifty rupees for himself from the parents of each child he admitted to the school. And as for Secretiveness, on the posterior
part of the squamous suture, he had no doubt that Balaram had noticed that long after he heard that Bhudeb Roy had another steady trickle of money flowing in from the police station in the next village, in exchange for secret monthly reports on almost everybody in Lalpukur. It’s only natural, Balaram explained to him once. Lalpukur is a border town and the police are given money from their headquarters to get information. If they didn’t spend it somehow, the funds would lapse and they’d have to go without their own cuts. Besides, it has to be said of them that they’ve proceeded on sound phrenological principles in choosing Bhudeb Roy to be their informer: his cranial capacity is enormous – there can’t be any doubt that he’s as clever as a fox – and he has exactly the right kind of squamous suture (Ghosh: 22-23).

Through the discourse of phrenology, Amitav Ghosh foregrounds and criticizes the element of superstition, irrationality, and racism inherent in the Western society however; it does not absolve Indian society of the same weaknesses. This critique is not successful because Western society is able to come out of these superstitions. On the other hand, Balaram, an Indian starts believing in phrenology as a natural science when hardly anyone in Europe believes it to be so. It becomes more important when elected representatives in India support superstitions in Twenty First Century by making statements, like, astrology is better than meteorology as far as weather forecast is concerned, neurosurgery was well developed in ancient India, and ancient sages used to move in the outer space in the spaceships powered with cow’s urine. These politicians along with the author instead of challenging the discourse of Orientalism, subscribe to it.
The novel in its bid to challenge Western Reason exposes that the primary concern of upper-caste people studying in colleges was to defend Brahmanical scriptures and prove them scientific as evident from Gopal’s statement:

[T]here were certain very 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 brahmins to further their own interests. It was urgently necessary, therefore, that the society make known to the masses of Hindoostan how they were daily deceived and cheated by the self styled purveyors of religion.

For example, it was certain that the pandits and brahmins had distorted the ancient Hindu idea of God, the Brahma, into their thousands of deities and idols, so that they could make money quicker. Just as a shopkeeper might open new counters, so each new god was a steady new source of income for the priests. As for the real Brahma, he was without attributes, without form, nothing but an essence, in everything and in nothing.

In fact, Gopal said in a sibilant whisper, the Brahma is nothing but the Atom….And so, too, he said, it has been proved beyond all doubt that the Universal Egg of Hindu mythology is nothing but a kind of Cosmic Neutron….I propose, therefore, that we begin all our meetings hereafter
with salutations and prayers to the Cosmic Atom (emphasis in the original) (Ghosh: 49-50).

This statement by Gopal confirms Orientalist view of India as expressed by James Mill who considers Hindus ignorant of the laws of nature and for them natural world is A distorted image of the world in which they lived. Their religion consisted of the ‘primary worship’ of ‘the designing and invisible beings who preside over the powers of nature, according to their own arbitrary will, and act only for some private and selfish gratification’. Within that world of self-aggrandizing, divine aristocrats… it was no wonder that the language of servile men was hyperbolic and that interactions between the two were grounded in fear and expressed in flattery (Mill: 268).

Even if they do not try to defend science in Brahmanical scriptures, they do not question their role in caste-based discrimination, which is the biggest source of poverty in India.

Another incident that aligns Balaram with Orientalist depiction of Indians is his choice of his role model i.e. Jagadish Chandra Bose, the scientist from his own district and whose theory of sensitivity in plants, once claimed a breakthrough was discredited in the absence of scientific proof. He is so impressed with Bose that he chooses his birthday

[B]etween any one of several dozen days in May and June when Jagadish Chandra Bose, in a laboratory in south London, demonstrated to stunned audiences of scientists and poets and politicians, all half-deafened by the ringing of sabres in Europe, that even a vegetable so unfeeling as a carrot can suffer agonies of fear and pain (Ghosh: 42).
Out of the Indian scientists Meghnad Saha, C. V. Raman, Jagadish Chandra Bose and others mentioned in the novel only Bose mesmerizes Balaram because only Bose confirms the discourse of Orientalism. One reason behind Bose’s initial success as a scientist lies in the immediate circumstances that extracted sentimental response in place of scientific investigation from the scientists. He presented his theory just after the First World War when scientists were more concerned about the wrong use of science and technology as Michael Adas points out

The mechanized slaughter on the Western Front corrupted or undermined the credibility of most of the ideals and assumptions on which the Europeans had based their sense of superiority to all other peoples and from which they had fashioned that ideological testament to their unprecedented hubris, the civilizing mission. Years of suicidal devastation forced European intellectuals to question the very foundations upon which their thought and value systems had been built: the conviction that they were the most rational of all beings, in control of themselves, of other peoples, and of all creation (Adas: 372).

Under such circumstances when they were feeling that mythology is better than science because it does not cause large-scale destruction and mass murder, Jagadish Bose presented his findings that were nearer to mythology than science. It was a temporary phase when they started looking at his theory from scientific angle they discredited it. Though he lost his credibility in the world of science he enjoys more respect than any other scientist in the nationalist scientific discourses because his reputation in India rests on his being a “symbol of Indian science and a pioneer who had Indianized modern science to make it
compatible with the culture of an ancient society” (Nandy: xii). Jagadish Bose is seen as a representative of ancient Indian philosophy who seems to prove it both scientific and humane that respects even plants and animals as he himself admits:

India through her habit of mind is peculiarly fitted to realize the idea of unity, and to see in the phenomenal world an orderly universe. It was this trend of thought that led me unconsciously to the dividing frontiers of the different sciences and shaped the course of my work in its constant alternations between the theoretical and the practical, from the investigation of the organic world to that of organized life and its multifarious activities of growth, of movement, and even of sensation (Nandy, 1995: 60).

A close look at the Indian society reveals that this philosophy is merely a tool to camouflage the brutal aspects of the same philosophy and society towards social and cultural others like untouchables, women etc. Due to the circumstances prevalent at the time Jagadish Bose’s discourse was accepted as natural science, the author through Balaram tries to prove the universality of this brand of science or rather pseudo-science in a very subtle manner when he says, “Science doesn’t belong to countries. Reason doesn’t belong to any nation. They belong to history – to the world” (Ghosh: 57). Undoubtedly, science belongs to the world or rather to the universe but that is naturel science not the socio-cultural discourses taken as natural sciences due to various reasons. The idea of subjugated knowledge propounded by some critics has no truth because the inventions of many other Indian scientists are acknowledged all over the world. For instance, C. V. Raman, who was awarded Nobel Prize in 1930 for the discovery of spectral effect also known as Raman effect is still studied all over the world. Raman could see the unscientific
elements in the research of Bose that is why he called his research on feeling in plants a “mumbo-jumbo” (Dutta and Robinson: 129). Another Indian scientist who left a mark in the field of sciences is Meghnad Saha whose “formulation of the likeness between a star and an atom had laid the foundation of a whole branch of astrophysics” (Ghosh: 43). He completely escapes the orientalized version of Indians. He is proved opposite of what Orientalists term Indians and orientalized Indians feel proud to be when he says:

I believe and have proved that this insistence on primitive technology shows a very retrograde and antiscientific mentality, and persons who are wedded to this mentality would bring disaster to the country when they are in power (Baber: 233).

He worked very closely with the first Prime Minister of India Jawaharlal Nehru who believed “the future belongs to science and to those who make friends with science and seek its help for the advance of humanity” (Baber: 232) and became the tool of modernizing India to some extent. However, the reactionary forces that believe Brahmanical scriptures as the ultimate source of science, technology and philosophy stall this process of modernization through research in the field of natural sciences because this process also brings out changes on socio-cultural front. Amitav Ghosh instead of questioning the superstitions, ignorance, technological backwardness and unscientific temperament prevalent in India takes the story out of India to the oil-rich Gulf countries and shows how the lack of scientific temperament, technological advancement and heavy industry made them victims of colonialism.
To show how advancement in the field of science and technology helped in the western colonization of al-Ghazira, Ghosh goes back to the time when oil was not discovered there. It was a

[S]mall 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 of 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 Great Hill behind the town, smiled upon them, took his dues and disbursed a part of them in turn when British gunboats paid their visits to the little harbour (Ghosh: 238).

It was a technologically backward place ruled by Malik who like most of the monarchs was least concerned about the development in the field of science and technology. Therefore, people living on this land were unaware of mineral oil, its uses and the changes it can bring out in the human life and society. However “A few years ago the British had found oil in some of the kingdoms around al-Ghazira, and already there were rumours that al-Ghazira was just a speck of sand floating on a sea of oil. So the British, for the first time, sent a resident to al-Ghazira, to make the Malik sign a treaty which would let the British dig for oil” (Ghosh: 268).

The Europeans discovered that this land is rich in oil; therefore, they tried to persuade Malik to award them exclusive digging rights that he denied keeping in mind “histories of the great Baghdadi and Cairene dynasties, lives of the caliphs and the kings
and so on” (Ghosh: 268). Once transported to the glorious past he lost touch with the present and misjudged his strength and “From one of these he got an idea. In his madness he decided he would teach the British a lesson” (Ghosh: 268), which was beyond his capability. On the other hand, the British were more rational in their approach as they resolved the issue in a different manner “together, with a little help from the Amir’s bodyguards and the Oilmen, they would storm the Old Fort, banish the Malik and the past, and install the Amir and the future” (Ghosh: 277) and gets the exclusive digging rights.

Undoubtedly, development in the field of science and technology enabled the British to rule over the world but the argument that there should be no science and technology or technologically advanced societies must not have colonized other parts is absurd because it goes against the basic human nature. The major reason behind these people becoming colonies is that they chose superstition and mythology instead of science. That is why in the post-colonial era despite their economic wealth their populations are ignorant, they do not have scientific temperament and lack technological skill therefore they depend on foreign labor to run their own oil industry. For instance, Kuwait an oil-rich country is a “rentier state. Its indigenous population is outnumbered by foreigners, who comprise an astonishing 75% of the work force (Farah et al.: 42), and therefore “its economy depends for its survival on overseas investment” (Findlay, 1994:97-98). People living in these states have an orthodox mindset but electronic gadgets imported from industrially developed countries enthrall them. Amitav Ghosh in this novel shows that both Ghaziris as well as migrants are more interested in gadgets like cassettes recorders, watches etc. even in the field of medical science the indigenous medicines fail to compete with the allopathic medicines as Rakesh realizes,
The trouble really lay in the product. It was soon clear that people no longer wanted Ayurvedic laxatives. There was no market for black viscous liquids in old rum-bottles; they wanted sparkling, bubbling salts which dissolved in water, or milky syrups in bottles with bright labels. They wanted advertisements and slogans which promised more than mere movement – promotions and success at work, marital triumphs, and refrigerators in their dowries. Regularity, balance and inner peace no longer sold (Ghosh: 195).

Ghosh here tries to show that colonialism is the only reason behind this marginalization however; the real reason is that the Ayurveda is not updated for centuries they still refer to Patanjali and Charak who died centuries ago and try to find treatment for all diseases in the books written by them, which is quite irrational and unscientific.

Another issue that relates this novel with Orientalism is attitude towards capitalism. Ghosh follows Gandhian approach towards capitalism when he condemns only heavy industry and multinational corporations. He has all praise for small businesses run by people like Zindi, Forid Mian, Nury and many others. This novel is a critique of capitalism as a “desiring-machine” (Deleuze and Guattari, 1983: 8). Undoubtedly Western capitalism’s power to colonize the under-developed world by fostering a dependency on technological advances is a major concern however why the Third World should not allow its people to develop scientific temperament and why the Third World instead of developing technology take astrology, phrenology, mythology and superstitions as science is equally a matter of concern. The solution to this problem does not lie in rejecting science and technology rather it lies in the dimension suggested by Saha who helped in the development of heavy industry in India.
Amitav Ghosh leaves this dimension and moves towards mysticism, superstitions and irrationality the traits Orientalists associated with Orient. He proposes this solution through Alu, who has a Gandhian vision of anti-materialist society while trapped under the collapsed building for four days. Very irrationally, he equates money with germs because he feels that:

[T]ravels from man to man carrying contagion and filth, sucking people out and destroying them even in the safety of their own houses, even when every door and window is shut? Which is the battleground which travels on every man and every woman, silently preparing them for their defeat, turning one against the other, helping them destroy themselves?

That was the real question, and Pasteur had never known it.

Then he leapt to his feet and with a sigh the whole crowd rose with him. He shouted in Arabic: Wa ana warisu, and I am his heir, for in the ruins of the Star I found the answer.

Money. The answer is money.

The crowd gasped, and while they were still reeling he shouted again: We will wage war on money. Are you with me?

And the whole crowd shouted back: Yes. Yes. Yes.

No money, no dirt will ever again flow freely in the Ras. Are you with me?

And again the crowd roared: Yes (Ghosh: 302-303).

The way Alu attains divine position shows the Orients as superstitious as pointed out by the Orientalists. This divine position helps him persuade his fellow migrants to start
a campaign to vanish money from their community. Though it is projected that their movement is non-violent gradually it becomes violent and criminal in a very subtle manner, as evident from their behaviour with Romy the shopkeeper. They went “to Romy with a huge gang and they said: Your shop spreads dirt in the Ras. We won’t put up with it. Either join us and we’ll run it together, like everything else, or you’ll lose your shop” (Ghosh: 323). The supposed presence of germs and the use of carbolic acid becomes a pretext to perpetrate violence on people. The illiterate and ignorant people are unable to understand scientific words- germs and carbolic acid and treat them like the discourse of a new religion that has to be served and saved even at the cost of their own lives. Like the communal discourses, the scientific terminology becomes a source of violence in the society. The fate of scientific discourses in the hands of ignorant masses can be judged from the meeting when,

[T]he whole of the Ras gathered around Hajj Fahmy’s house and till late in the night they talked about the terrible dirt that shops deal out.

Next morning Romy began to beg people to go in. He needed money now. But nobody even passed by his shop any longer; they skirted fearfully around it as though it were a leper’s lair. They were afraid; afraid of the dirt and the germs. Germs! In Romy Abu Tolba the Fayyumi’s shop, where everyone had bought everything for God knows how many years!

At the end of the day Romy knew he was beaten. What’s the use of a shop without customers? He went to Hajj Fahmy that evening and said: Do what you like with my shop.
They say Hajj Fahmy kissed him on both cheeks and hugged him like a brother.

The day after that they went to the shop and washed every inch of it with carbolic acid. They washed the shelves, the floor, the walls, the counter, even the lane outside. They took away Romy’s old iron cash-box, and in its place they put their files and account-books.

That night on the beach they burnt the cash-box and danced around it (Ghosh: 324).

Up to this time, their acts can be called rational from their survival’s point of view however; they overstep their limit when they challenge the contractors who employ them. The contractors are at a higher level in social hierarchy and like Bhudeb in India are closer to the ruling elite and hence to the state apparatus that is already suspicious of people living in the Ras. After their humiliation at the hands of their employees, they alert the administration. When the whole of the Ras plans to go on a shopping trip Zindi comes to know that Jeevanbhai Patel was arrested while indulging in an activity that goes against the rulers and he wanted to make use of their trip for some political purpose she warns them,

He knew that all of you are going to the Star today. I told him so last night. I think that’s the reason why he was arrested. I don’t know exactly how, but I’m sure that’s the reason. He was planning something. He was arrested on his way to the Old Fort….Don’t go today. Take my word for it; I have nothing to gain. I came straight here, as soon as I heard about Jeevanbhai –
to warn you. I had to. I didn’t think you would believe me, and I can see you don’t, but I had to try. That’s why I’ve come (Ghosh: 359-360).

They did not listen to her and materialize their trip. The police on the other hand, rely on the clues provided by Jeevanbhai Patel during his interrogation and take them for people revolting against the state, and attack them. Zindi is the only rational person in the crowd who is marginalized by the mobocracy. Once again, through the depiction of Orientals Ghosh proves that they do not understand statecraft and hence are incapable to rule themselves. Despite this weakness, Ghosh is successful in highlighting the dark side of capitalist driven neo-colonialism that uproots people from one place and plant them in an alien land and convert them into its tools. He describes the migrant workers as:

[G]hosts behind the fence were not men, they were tools – helpless, picked for their poverty. In those days when al-Ghazira was still a real country they were brought here to slip between its men and their work, like the first whiffs of an opium dream; they were brought as weapons, to divide the Ghaziris from themselves and the world of sanity; to turn them into buffoons for the world to laugh at (Ghosh: 281).

Here he points out that the multinational corporations are responsible for their exploitation however, he neglects the fact that they are also responsible for what happens to them at the end.

Ghosh discussion on reason, on the relationship between state and people, education and people and different sections within society forms the most important part of the novel where. Balaram’s obsession with reason starts in his college days and reaches irrational dimensions. As a college student, he becomes President of “Society for the
Dissemination of Science and Rationalism among the People of Hindoostan” (Ghosh: 113). He urges the fellow students to follow Pasture’s principles of hygiene and leaving aside the entire world, he wants them to start a campaign against the dirty underwear by inventing a fancy slogan “The Campaign for Clean Clouts” (Ghosh: 113). However, he is temperamentally irrational and lacks the courage to lead the movement therefore when he hears some students saying, “Let’s see his clean little knick-ers for ourselves. We should have finished the job the first time. Come on. And the crowd breaks and surges towards him. He totters on his chair in unspeakable, bowel-loosening terror” (Ghosh: 154). He jumps off a balustrade and broke his legs, in this way the movement comes to an end.

The relationship between state and citizens is foregrounded through the life of Balaram and Alu. Balaram has a feud with the village strongman Bhudeb Roy who is also a police informer. Based on information provided by Bhudeb Roy police assumes Balaram as a terrorist. The police do not try to investigate the matter on their own. According to Yumna Siddiqi, Amitav Ghosh by “addressing the place of police in the postcolonial state, the novel raises questions about the character of modernity in India” (Siddiqi: 179). He fails in his attempt because the conflict is not between state and people rather the conflict is between two groups-- one recognizes the state, develops closeness with the people who are part of state apparatus and uses the state apparatus to its advantage another group behaves as if living in a free society where there is no state apparatus. Members of second group do not recognize the state apparatus either they do not know anybody who is a member of state apparatus or they do not approach their friends for help from state apparatus in the time of crisis in short, they never have a dialogue with the people in the state apparatus. However, Yumna Siddiqi has a different view that modern nation state is
“imagined in two ways: as political communities that are universally governed by a rule of law, assuring the duties and privileges of citizenship to all; and as “ethnic” communities that have a sense of shared history and culture” (Siddiqi: 179). Many critics feel that Ghosh questions the idea of nation as something benevolent. In this novel, Amitav Ghosh foregrounds that India as a newly liberated nation inherited the state apparatus developed by the colonizers, which is repressive in nature. Partha Chatterjee also supports this idea in the following words:

the new state chose to retain in a virtually unaltered form the basic structure of the civil service, the police administration, the judicial system, including the codes of civil and criminal law, and the armed forces as they existed in the colonial period. As far as the normal executive functions of the state were concerned, the new state operated within a framework of universal rationality, whose principles were seen as having been contained (even if they were misapplied) in the preceding state structure (Chatterjee: 4).

Following this idea, Amitav Ghosh makes Balaram a victim of colonial state apparatus in the manner of Velutha, a character in Arundhati Roy’s *The God of Small Things* a novel written much later. He forcibly converts an upper caste into a subaltern, despite the fact that the conflict is on a different level that Amitav Ghosh knowingly neglects and finds the source of violence in enlightenment and emergence of nationalism as Spivak argues:

the end of the ‘German’ eighteenth century (if one can speak of ‘Germany’ as a unified proper name in that era) provides material for a narrative of crisis management: the ‘scientific’ fabrication of new representations of self
and world that would provide alibis for the domination, exploitation, and epistemic violation entailed by the establishment of colony and empire (Spivak: 7).

She traces the source of institutionalized violence in the state apparatus; however, Balaram is not purely a victim of institutionalized violence perpetrated by the state he can also to be blamed for taking law and order into his hands towards his death. The conflict between Balaram and Bhudeb starts from Balaram’s side when he neglects the social etiquettes required from an educated person that too a teacher just only to satisfy his ego that he is perfect in phrenology. Bhudeb Roy calls Balaram to examine the skull of his newborn baby and predict the future life of the baby. Balaram in a very insensitive manner predicts that the baby would become a criminal once grownup. In fact, Balaram should not have passed such a detrimental judgement when there is a lot of scope to doubt the theory given the fact that skull of a newborn baby is very soft and it keeps changing depending on how it is handled. However, neither he cares for social etiquette nor for the loopholes in his theory and very irrationally labels, an innocent baby criminal and provokes his father. Bhudeb takes revenge on Balaram in his own way he does not hurt him rather “Next morning Toru-debi woke to find that six of their coconut palms had been axed and all their lemon trees uprooted during the night. Nonder-ma, who always knew, told her the whole story” (Ghosh: 26). Toru-debi immediately knows that all this is only due to irrational nature of her husband so she says, “If I ever hear again that you’ve gone out of this house with those instruments, there’ll be nothing left in your study. Those books have cursed you” (Ghosh: 26).
After this, incident things between Balaram and Bhudeb Roy become normal but Balaram as compelled by his nature again provokes him by spoiling the annual function of the school as evident from the following description given in the novel:

He took a deep breath and stepped in.

For a breathless moment he stood frozen, his eyes riveted to the image. Then he raised his hand and shouted: Wait!

The startled pandit stopped in mid-mantra, his mouth open. In the crackling silence everybody turned and followed his pointing fingers to Ma Saraswati’s head, brightly lit from the inside. There was no denying that she looked distinctly migrained. (It was simple really: Bhudeb Roy, unable to resist the temptation to save a few paise, had refused to pay for special insulation for the lights inside the image’s head, and as a result the clay had buckled when the lights were switched on.)

But everybody’s eyes were on Balaram now. He shouted again: Wait! Then he ran across the tent and, with dirty, defiling sandals still on his feet, he leapt on to the platform. The pandit fainted away from shock.

Balaram paused for a moment, his hand poised over the image’s head. Then he ripped the dyed cotton hair off the head and laid the clay skull bare. He pointed to the peeled head with the light still bravely flickering inside and turned around. This, he said to the electrified crowd, is not Saraswati. This is not Learning, he said, knocking the clay with his knuckles. This is Vanity.
The scraping of the Inspector of Schools’ chair tore through the silence. He stalked out without so much as a glance at Bhudeb Roy. Bhudeb Roy called off the ceremony, and people said that he didn’t swallow a morsel at the feast afterwards (Ghosh: 33).

Balaram did so because he hates Bhudeb Roy for being ambitious and miserly which are not criminal activities however to spoil a public function in the middle, to break an idol on the stage is not only against social etiquette but also against law. However, Bhudeb does not report the matter to the police; he again takes revenge in his own way by poisoning fish in Balaram’s pond.

Another incident through which the relationship between state and people is foregrounded is falling of a plane on the school building. Here Ghosh confirms that Oriental masses are completely ignorant and they have no understanding of law and order and state. Bhudeb Roy decides to sell the army plane that falls on his school building and the entire village is there to buy it including Bolai-da who once served in the British Indian Army and is supposed to know that a fighter plane is a government property that cannot be sold by anybody. Ghosh makes him so foolish that he is the first one to indulge in the illegal activity of buying parts of the fighter plane from Bhudeb Roy as depicted in the novel:

Bolai-da decided that the metal sheets of the fuselage would make a good roof for his expanding cycle and hardware shop. It would be a kind of advertisement as well: people would go out of their way to visit a shop which had an aeroplane for a roof. And, besides, at the time business was so good that he had money to waste (Ghosh: 98-99).
Here Ghosh presents the Orientals in confirmation with the Orientalist discourse despite the fact that it is impossible to sell parts of a fallen fighter plane anywhere in India even in pre-independence India. The author puts this scene in the novel to satisfy the Western audience who feels happy to find the Orientals still engrossed in ignorance and foolishness. Then he makes the army to visit the village and recover all parts of the plane from the villagers who bought those parts from Bhudeb Roy.

Shombhu Debnath is also an important character for the study of relation between police and people. He is a person who does not believe in rules and regulations, law and order and even social etiquette and ironically, Balaram considers him a great teacher. Bhudeb Roy develops a dislike for him because he keeps whistling throughout night near his house and disturbs his sleep every night, steals his toddy as evident here:

> Drinking God’s milk, Shombhu answered, and singing. Bhudeb Roy exploded: What?

> Raga Lalit of course, Shombhu said, surprised. What else could you sing at this time of the night?

> Come down here with that pot, Bhudeb Roy roared.

> Why? The toddy’s fresher here. Closer to God. It ferments nastily when it gets down to earth with men and money.

> Thief. Bhudeb Roy flung himself at the palm. Thief, thief, petty thief.

> Next day he had all his palms chopped down. That was the only time he had ever destroyed a source of income (Ghosh: 70-71).
He has illicit relationship with Bhudeb’s wife. He fathers a girl child, and finally takes the woman to Balaram’s house. He attacks Bhudeb Roy without any direct provocation when he “is holding a meeting, a proper microphone-and-loudspeaker meeting, under the banyan tree today? He’s going to lay the first stone for a road, an absolutely straight so-big-and-black macadam road from the banyan tree to his house” (Ghosh: 128). Shombhu Debnath attacks Bhudeb Roy with carbolic acid:

And then suddenly with a gurgling whoosh a stream of disinfectant poured out of the tree, right over Bhudeb Roy. The microphone drowned in a cacophony of squeaks and screeches. Bhudeb Roy collapsed on to the platform, spluttering and coughing (Ghosh: 130).

Balaram is also responsible for this attack because not only he provides the carbolic acid but also accompanies him. Rakhal, Shombhu Debnath’s son also indulges in the criminal activities. He builds a secret place in the forest and makes bombs there:

They found him all but invisible in a copse, a small fortress of bamboo…. There were piles all around him: piles of old bottles and tin cans, of oriole-yellow powder, rusty nails and metal scraps, broken razor blades, torn rags, and other steel-grey and nondescript powders….They’re bombs, he said. Bombs (Ghosh: 83-84).

These bombs are to be used in communal riots most probably as he himself hints at, “There’s a war in the towns, too. They need bombs. You watch; I’ll be rich” (Ghosh: 84) and finally hides bombs in Balaram’s house that blast when the police shoot a warning flare and kills everybody except Alu who was outside the house at that time.
A few hours before the tragic death of entire household, Balaram gets a chance to strike a compromise with Bhudeb and save all the lives when Shombhu Debnath comes to him and offers a solution:

Shombhu Debnath, ill at ease, shifting his feet, went on disjointedly: Yes, it’s best that we go. It’s me and her and the child that he wants. He has no quarrel with you: you’re two halves of an apple if you only knew it, one raw, one rotten, but the same fruit. I’m his real enemy, and I’ve won as much as I want to win, and now it’s time to run. Any healthy animal tricks what it can’t beat. He’ll never find me, and I’ll start again somewhere. This is how I came here – with a woman and a child and a bundle of clothes – and this is how I’ll go (Ghosh: 152).

Shombhu Debnath pleads him to stop this irrational activity and save the lives:

Balaram-babu, he said, I don’t want anything for myself. I only want you to go back into the house and go away to Calcutta for a holiday. You must stop this: this is madness. There’s no reason to go on like this. No reason. Stop; I beg you, stop, and go away somewhere for a few days (Ghosh: 153).

However, he does not listen to him, decides to follow his own line of reasoning that is completely irrational or rather an act of madness, and brings catastrophe on everybody associated with him. Long before Ghosh, Thomas Hardy discussed this kind of reasoning in his novel *Far From the Madding Crowd* and concluded:

George’s son had done his work so thoroughly that he was considered too good a workman to live, and was, in fact, taken and tragically shot at twelve o’clock that same day—another instance of the untoward fate which so
often attends dogs and other philosophers who follow out a train of reasoning to its logical conclusion, and attempt perfectly consistent conduct in a world made up so largely of compromise (Hardy: 45).

The problem here lies in the personality of the Balaram not in philosophical traditions or the State’s antagonism towards its citizens. However by bringing in the idea of reason in this novel Amitav Ghosh instead of problematizing the irrationalities and superstitions inherent in Brahmanical culture that suppresses all dissenting voices in family and society for instance rationality of Toru-debi and Shombhu Debnath loses its value before the family head Balaram, he only questions the influence of European enlightenment. Tapan Raychaudhuri provides a balanced assessment of this East-West encounter when he says:

Rational assessment of current needs and received traditions, both indigenous and alien, became the hallmark of Bengali thought in the nineteenth century. Arguably, this development marked a total discontinuity in the history of the region. A product of the colonial encounter, it was a development with explosive potentialities which acquired a measure of autonomy (Raychaudhuri: 47).

Yumna Siddiqui feels that “Balaram’s confidence in the power of scientific rationality is not merely idiosyncratic, but rather has the colonial genealogy” (Siddiqui: 185) according to her “Ghosh clearly patterns Balaram’s character upon historical figures such as Jawaharlal Nehru and Rammohun Roy who attempted to forward a progressive, rational program of social transformation” (Siddiqui: 185). This comparison is not convincing because Nehru was a person with practical reason and scientific temperament
as. In *The Discovery of India* he says, “the methods and approach of science have revolutionized human life more than anything else in the long course of history, and have opened doors and avenues of further and even more radical change, leading up to the very portals of what has long been considered the unknown” (Nehru: 17).

The idea of Orientalism once again comes to the forefront when towards the end of the novel; a group of Indian doctors in El Oued, a small town in Algeria decides to arrange a cultural program. Dr. Mishra and Mrs. Verma represent two seemingly opposite streams that are highly overlapped. Mrs. Verma wants to present an exalted representation of Indian culture by performing a play based on a legend from the Mahabharata. On the other hand, Dr. Mishra objects to this play because he considers it will “give them the impression that the whole of India is still in the Middle Ages, still wallowing in ghosts and ghouls and demonology. I’d like them to know that some of us at least are in the modern mainstream” (emphasis in the original) (Ghosh: 412).

The idea to stage the play is disrupted due to the death of Kulfi that starts a debate on how to cremate her. This debate presents Indians as Orientalized subjects. Dr. Verma proposes to perform her last rites in Brahmanical manner. First Dr. Mishra criticizes her for her orthodox nature then he describes the process of proper cremation. However, Dr. Verma challenges this orthodox description, when she says:

> Rules, rules, she said softly. All you ever talk about is rules. That’s how you and your kind have destroyed everything – science, religion, socialism – with your rules and your orthodoxies. That’s the difference between us: you worry about rules and I worry about being human (Ghosh: 442).
She says the spirit to show respect to the dead person is more important than the religious or rather orthodox religious rituals. Despite adopting a more humane approach to religion and the process of cremation, Ghosh homogenizes India and Hinduism very much like the Orientalists.

*The Circle of Reason* discusses rationality and science in postcolonial Indian society, and the state apparatus of nation through various characters like Balaram, Alu and many others. Ghosh problematizes the colonial statecraft retained by the newly independent postcolonial world however if they replace the colonial state apparatus with their own native systems the situation will be worse for the people. Undoubtedly the system needs to be updated and it should be made more humane, but Ghosh’s characters are victims of irrationality for instance Balaram’s death is more of a suicide than institutional murder. Similarly, Alu unleashes the forces that he neither understands nor knows how to control. When it comes to science Ghosh uses pseudoscience of phrenology to question the Western science at a time West does not consider phrenology a science. In a very subtle manner through justification of phrenology, he tries to prove scientific element in Indian irrational practices. He does not take up the Indian social scientists and intellectuals like B. R. Ambedkar, Bhagat Singh, Rabindranath Tagore etc. who are far more rational and provides higher place to Jagadish Bose than Saha, Raman etc. who are real scientists. Therefore, despite his effort to challenge colonial legacies he only confirms the Orientalist notions of the Orient in his depiction of Oriental characters.
WORKS CITED


