Identity, Indigeneity and “Mythologermerm”: Reading the Stories of Satyajit Ray’s Professor Shonku as Postcolonial Science Fiction

Goutam Karmakar\textsuperscript{a} and Tanushree Ghosh\textsuperscript{b}

\textsuperscript{a}Department of English, Barabazar Bikram Tudu Memorial College, Purulia, India; \textsuperscript{b}Department of English, Kabikankan Mukundaram Mahavidyalaya, India

ABSTRACT
Satyajit Ray’s Professor Shonku stories depict the futuristic inventions and wondrous journeys of Professor Trilokeshwar Shonku, a renowned Bengali scientist of international acclaim. Shonku makes multiple transatlantic journeys, as seen in those stories, for representing Indian research in the international scientific community. His groundbreaking innovations, such as the \textit{miracurall pill}, \textit{the annihiilin pistol}, and the \textit{omniscope}, evoke admiration and envy among European scientists, and his scientific undertakings juxtapose Western laboratory-based sciences with a variety of indigenous and local epistemologies. By investigating some of the stories of Professor Shonku, this paper strives to depict how these stories subvert the western genre of science fiction by legitimizing “native knowledge,” possessed by Professor Shonku as well as other characters as scientific and rational. Within the context of postcolonial literature, this paper also aims to locate Ray’s Professor Shonku stories in the tradition of Bangla “kalyavigyan.” Furthermore, this paper attempts to study selected stories of Professor Shonku to delineate how the stories embody anti-colonial nationalism in the representation of India, project the postcolonial notion of “alternative modernities” and indigenize the genre of SF through the juxtaposition of indigenous epistemologies as well as myth and folkloric traditions.

KEYWORDS
Postcolonialism; nationalism; subversion; indigeneity; myth; Shonku

CONTACT Goutam Karmakar \textsuperscript{a} goutamkrmkr@gmail.com Department of English, Barabazar Bikram Tudu Memorial College, Purulia, West Bengal, India

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1. Introduction

Postcolonial literary studies focus on “contrapuntal reading”\(^1\) of imperialist subtexts inherent in western canonical texts as well as indigenous modes of “writing back”\(^2\) that challenge and subvert colonialist representations. The concentration of postcolonial science fiction studies is on the re-discovery of imperialist tropes in western SF and the investigation of anti-colonial resistance in non-Anglophone SF. Nalo Hopkinson, in the introduction to the anthology *So Long Been Dreaming: Postcolonial Science Fiction and Fantasy* (2015), opines that “Arguably, one of the most familiar memes of science fiction is that of going to foreign countries and colonizing the natives” (7). Hopkinson (2015) further states that the indigenous writers of SF appropriate the “meme of colonizing the native and, from the experience of the colonizee” (9). Western SF narratives emerge from technological fantasy associated with European imperialism; John Rieder (2008) finds imperial imagination in the early SF narratives of “lost-race motif” that deal with encounters between Western explorers and the members of an extinct civilization (23–24). Early SF sub-genres such as “space opera” and “lost-race narrative”\(^3\) depict the fantasy of imperialism and colonial expansion in the form of encounters between the technologically advanced European self and exoticized human or alien-Others. In *Postcolonialism and Science Fiction* (2011), Jessica Langer uses the phrase “postcolonial science fiction” to refer to SF written in all countries with a shared colonial heritage, and she argues that postcolonial science fiction hybridizes, parodies and mimics the colonialist tropes of Western SF (4). Additionally, Langer (2011) highlights the salient characteristics of postcolonial SF as:

A central argument of this book is that postcolonial science fiction utilizes these same generic conventions in a radically different way: to explore the ways in which Western scientific discourse, both in terms of technology and in terms of culture (both real cultural effects and effects on cultural production), has interacted with colonialism and the cultural production of colonised peoples. It also foregrounds the concept that indigenous and other colonised systems of knowledge are not only valid but are, at times, more scientifically sound than Western scientific thought. (9)

Postcolonial SF subverts the generic framework of Western science fiction by appropriating colonialist SF tropes and casts doubt on the superiority of European technology by including indigenous epistemic branches. Suparno Banerjee (2020) identifies Indian SF as one of the oldest SF traditions outside Europe and America (1) and points out that “the development of Indian SF is intrinsically connected to colonial and postcolonial politics” (110). Indian proto-SF texts of the colonial period, such as *A Journal of Forty-Eight Hours of the Year 1945* (1835) by Kailash Chunder Dutt and *The Republic of Orissa: A Page from the Annals of Twentieth Century* by Shoshee Chunder Dutt, are futuristic extrapolations of the anti-colonial struggle against British colonialism. While Indian SF imagines diverse utopian and dystopian futuristic settings that reject the European technological hegemony, regional SF written in Bengali or Marathi shows similar tendencies to reject colonial stereotypes and speculate on indigenous technological “novums.”\(^4\) Bengali SF stories written by authors such as Jagadish Chandra Bose, Sukumar Ray, Premendra Mitra, Satyajit Ray, Leela Majumdar, Adrish Bardhan etc., are mostly fantastic tales written for young-adult readers that replace technologically advanced white explorers and scientists with Indian or Bengali subjects and depict the
utopian progress of indigenous technology. In the post-independence era, Premendra Mitra’s “Ghanada” stories and Satyajit Ray’s Professor Shonku stories (2004, 2008, 2020) imagine utopian, postcolonial futures and create indigenous heroes who challenge Eurocentric scientific hegemony. Atanu Bhattacharya and Preet Hiradhar (2018) state that in “Ghanada” stories, “Bengali hero, delineating his exaggerated achievements against greater colonial/imperial powers, sets in motion a process of decolonizing the binaries of the earlier SF narrative” (175). While “Ghanada” stories exemplify the genre of “tall tales” (exaggerated narratives); Ray’s Professor Shonku stories project a scientist as the protagonist and focus more on the cognitive framework of scientific rationality.

Satyajit Ray penned thirty-eight finished and two unfinished stories revolving around the exploits of Professor Trilokeshwar Shonku, an internationally acknowledged Bengali inventor and scientist. Many of the stories deal with Professor Shonku’s pioneering and futuristic scientific inventions occurring inside his provincial laboratory at Giridih; his interplanetary or international journeys to exotic locales; his entanglement in adverse situations concocted by his Western rivals, and his triumphant victory in the end. Ray’s stories of Professor Shonku not only demonstrate the remarkable advancement of an Indian scientist and his indigenous scientific technique, but also challenge the superiority of Western scientific discourse, and here Ray merges Western and Indian generic components, which is a hallmark of Indian SF. Suparno Banerjee (2020) argues that “Indian SF is a product of both the traditional imaginative literature of India and that of European colonial education and scientific ideas” (21). By incorporating intertextual references to canonical Western SF such as Mary Shelley’s Frankenstein, H.G Wells’ The Time Machine and Robert Louis Stevenson’s Strange Case of Jekyll and Hyde, Ray juxtaposes Western SF tropes such as extra-terrestrial journeys, alien narratives, the presence of robots and AI, time travel with indigenous tropes such as ghost stories, magical chants, and supernatural occurrences. Upamanyu Pablo Mukherjee in Final Frontiers: Science Fiction and Techno-Science in Nonaligned India (2020), observes that the stories of Professor Shonku represent an encounter between “modern sensibilities and ancient practices of knowledge that were scientific in their days, but can now only be thought of as magic” (66). Ray’s Professor Shonku stories not only demonstrate post-colonial hybridity through the juxtaposition of Anglophone and non-Anglophone generic tropes, but they also transcend the hegemonic parameters of western science through the deconstruction of the hierarchy of modern and ancient, western and non-western forms of knowledge.

This subversion of western scientific discourse and the projection of multiple trajectories of scientific knowledge is crucial in Bodhisattva Chattopadhyay’s notion of “kalpavigyan,” the Bengali term for SF (Chattopadhyay (2016, 2017). Chattopadhyay (2016) traces the Sanskrit root of the word “kalpavigyan and locates the “vigyan” – “knowledge of the material world” as a part of “gyan” – “all-encompassing knowledge” (436) that is not restricted to the laboratory-based sciences. The first part refers to “kalpana” or imagination that “allows escape from the stricture of laws (or vigyan)” (437). Chattopadhyay’s (2016) arguments dissociate the scientific elements of Bengali SF from the Western techno-scientific culture and support the inclusion of alternative sciences and anti-science elements associated with the indigenous culture of colonized nations. By taking into consideration the arguments of Suparno Banerjee, Upamanyu Pablo Mukherjee, and Bodhisattva...
Chattopadhyay, the paper examines selected stories of Professor Shonku within the broader context of postcolonial literature, arguing that these stories are crucial instances of Bengali “kalpavigyan” that subvert the western techno-scientific paradigm. The paper contends that how Ray’s Professor Shonku stories integrate alternative epistemologies connected with non-western nations’ traditional scientific methods and defy the principles of western science by incorporating local pseudo-sciences, myths, and by representing postcolonial India through utopian imagination and subversion of the colonial scientific “modernity” monolith.

2. Professor Shonku and postcolonial national identity

Edward Said, in his seminal work Orientalism (2001), points out how colonial discourse constructs the image of the non-European Other as the negative mirror image of the European self: “The Oriental is irrational, depraved (fallen), childlike, ‘different’; thus the European is rational, virtuous, mature, ‘normal’” (140). The repetition of such orientalist preconceptions and misrepresentations distorts the individual, collective and national identity of the colonized subjects. Anti-colonial movements reestablish national identity in response to orientalist depictions of formerly colonized third world nations as primitive and inferior. According to Ania Loomba (2016),

Anti-colonial struggles therefore had to create new and powerful identities for colonised peoples and to challenge colonialism not only at a political or intellectual level, but also on an emotional plane. In widely divergent contexts, the idea of the nation was a powerful vehicle for harnessing anti-colonial energies at all these levels. (182-183)

The concept of national identity is important in determining how historically colonized subjects are represented. Pramod K. Nayar (2008) points out the significance of the image of the nation in postcolonial writings: “Postcolonial writers, especially the first generation from the 1950s and 1960s, were conscious of their role in nation-building since the nation is also a cultural construct, built out of and upon the artistic, folkloric, theoretical, and philosophical discourses about the nation” (68). According to Nayar (2008), postcolonial writings have become a mode of self-representation and reconstruction of national identity for the subaltern subjects. The representation of postcolonial nations as a cultural construct emerging from the first-hand experiences of the indigenous subjects in the postcolonial writings counteracts the stereotypical images of primitivism and savagery constructed by the colonial texts. Indian SF shows a similar tendency of representing India as a newly decolonized nation advancing on the global stage by depicting the progression of Indian technology and utopian futuristic imaginations associated with India. Banerjee (2020) argues that Indian SF written in the second half of the twentieth century reflects “a vision of national consciousness” and shows the “postcolonial society’s struggle to establish a foothold in the new world order” (47). Shonku’s scientific accomplishment deconstructs orientalist stereotypes about India, and his competence establishes the “post-colonial Indian science fiction’s location at the confluence of ‘Nehruvian’ science policy and (inter)national political strategy” (Mukherjee 4). Upamanyu Pablo Mukherjee (2020) links Shonku’s “pure,” “disinterested” scientific knowledge and experiments with “the premises of scientific knowledge and scientific development – those keystones of Nehruvian national and international
policies” (61). Mukherjee’s (2020) arguments point out that the utopian progression of Indian science portrayed in Shonku stories echoes the Nehruvian image of postcolonial India’s progress following its independence from British rule.

Shonku’s private laboratory in Giridih represents a rural, third-world periphery that threatens Western metropolitan centers’ scientific superiority. Shonku is internationally renowned for his numerous inventions, including the *miracurall pill* (a pill that cures any disease), the *annihilin pistol* (a gun that renders objects invisible), the *omniscope* (a multifunctional device that combines a telescope, a microscope, and an X-ray), and the *orthiton* (a device that imparts human knowledge to birds), among others. Shonku’s transnational journeys to places such as Europe, Egypt, Africa, and Tibet for participating in scientific activities position him as the spokesperson of Indian science in the international scientific community, contributing to the repositioning of newly decolonized India in the emerging world order. Through the projection of Indian science in global space, stories such as “The Diary of a Space Traveller” and “Professor Shonku and Robu” from the collection *The Diary of a Space Traveller & Other Stories* (2008) express the newly decolonized India’s postcolonial need for self-assertion as a “nation.” Shonku’s successful extraterrestrial voyage in “The Diary of a Space Traveller” and his robot’s superiority against its European counterpart in “Professor Shonku and Robu” elicit a patriotic ethos and anti-colonial nationalism. Both stories deconstruct the primitivist portrayal of India and depict a decolonized India as a nation capable of challenging the West’s scientific supremacy.

The first published story in the Professor Shonku series, “The Diary of a Space Traveller” or “Byomjatrir Diary” (1961), written during the period of the Cold War and the space race between two newly emerging Superpowers, the USA and Russia, presents a mock-serious narrative of a Bengali scientist’s successful solo venture into the outer space and the planet Mars in a space ship constructed by himself in his laboratory along with his robot Bidhusekhar, his domestic helper Prahlad and his cat Newton. Shonku notes in his diary entry that his rocket is comprised primarily of chemical components of common, locally available items such as “toadstools, snakeskins, and empty tortoise shells” (*The Diary of a Space Traveller* 9). Shonku’s scientific methods are distinct from colonial laboratory-based scientific practices in that they represent indigenous and localized scientific enterprises. Thus, the story depicts the Indian space program as a futuristic utopia and portrays newly decolonized India as a technologically advanced nation capable of competing with global superpowers despite its limited resources and economic might.

Also, the story appropriates the western genre of space opera from a postcolonial perspective. As Istvan Csicsery-Ronay (2008) defines it, this space opera concentrates on “spectacular romances set in vast, exotic outer spaces, where larger-than-life protagonists encounter a variety of alien species, planetary cultures, futuristic technologies” (216). Simultaneously, space opera, a popular subgenre of Western SF, focuses on the heroic journey of the technologically evolved white man to outer space and his encounters with exotic aliens. Langer (2011) connects the “figure of the alien” and “the faraway planet ripe for taking” found in the western outer space narratives with the colonized subjects and the colonized nations of postcolonial studies (3). The western SF narratives of extraterrestrial voyages are dominated by “white, male, techno-fantasies – Westerns and the White Man’s Burden in Outer Space” (Singh 202). Langer’s (2011) association between
the dehumanized, alienated, colonized Others and the science-fictional Others points out how many western SF narratives frequently reduce the indigenous subjects allegorically to the bizarre and uncultured aliens (Langer 85). Thus, Western narratives of space travel bear imperial overtones in the representation of Westerners as technologically advanced voyagers aiming to colonize aliens of the faraway planets. Shonku’s accomplished solo expedition into outer space subverts the East-West hierarchy of power by positioning him as a third-world scientist and technically advanced space traveler. The story appropriates the extraterrestrial trope of the alien through the depictions of Shonku’s encounters with two alien civilizations – fish-humanoids on Mars and enormous ants on the fictitious planet, Tafa. The fish-humanoid aliens of Mars are represented as so radically different from human beings that Shonku and his companions cannot interpret their actions. When an army of around three hundred creatures starts chasing Shonku and his companions, Shonku dismantles his robot Bidhusekhar in order to prevent it from attacking the alien creatures. Shonku states, “It was not my aim to destroy life on this planet, without a good reason” (The Diary of a Space Traveller 20). Notably, Shonku’s space travel is motivated by scientific curiosity about outer space and extraterrestrial living creatures, rather than imperialist ambition. When he fails to establish any communication with the alien creatures, he decides to leave them in peace instead of intervening in their lives. On the other hand, the aliens of Tafa demonstrate a Eurocentric preoccupation with cultural superiority:

Their civilization is older by several million years than that on our Earth. Every single inhabitant is a brilliant scientist. Since each of them is as clever as the other, they are finding it quite difficult to live with one another. It is for this reason that, over the last few years, they have been ‘importing’ less intelligent people from other planets and getting them to live in Tafa. (The Diary of a Space Traveller 26)

In comparison to the inhabitants of other worlds, intelligent ants regard themselves as more civilized and scientifically advanced. Shonku is seen by the ant-humanoids as a representative of a less intellectual species, and the aliens express contempt for Shonku and wish to keep him in their world as a source of distraction. On the contrary, in his diary entry, Shonku observes that those ant-humanoids and the aliens “are far behind our human civilization. It will take them thousands of years to catch up with the human race” (27). Shonku considers the absence of buildings and trees on the planet as well as the underground shelters of the ant-humanoids as instances of their unscientific and primitive lifestyle. Shonku fires his snuff-gun (a gun invented by him to cause incessant sneezing) at an ant alien’s nostril and the creature remains unperturbed; Shonku remarks sarcastically, “These creatures haven’t even learnt to sneeze!” (29). Shonku’s statements reject the vainglorious claim of the supremacy of the ant-civilization of Tafa. Shonku’s superiority over alien civilization acts as a vehicle for extolling his Indian identity.

According to Bodhisattva Chattopadhyay (2017), the “appropriation of science from a nationalist perspective” and imagining “nationalist images for the purpose of bolstering cultural pride” are crucial thematic nodes in kalpavigyan (103). This nationalist outlook and cultural pride become apparent when Shonku dismantles the Eurocentric notion of the scientific hegemony of the West in the story “Professor Shonku and Robu” by presenting his technological inventions as superior to those of Western scientists. Here
in this story, Shonku’s robot serves as a foil to German scientist Borgelt’s robot. Shonku flies to Germany at the invitation of German scientist Professor Paumer to exhibit his most current invention – a robot equipped with mathematical skills, linguistic capacity, and the ability to answer 50,000 questions. Shonku regards his success in the field of robotics as a source of national pride, not just as an individual scientific accomplishment. He states:

But there is no point in keeping him [the robot] in a small place like Giridih. Shouldn’t the world learn how much a scientist in India has been able to accomplish, working with limited resources, and on a very small budget? If the word spreads, it will mean more glory for my country than myself. At any rate, that is what I am aiming for. (The Diary of a Space Traveller 137)

A striking characteristic of Shonku’s scientific career is that he accomplishes extraordinary feats with a minimal investment in scientific apparatuses; he states that he spends 333.85 rupees preparing his robot (The Diary of a Space Traveller 135). Ray’s (2008) portrayal of Shonku’s scientific inventions as cost-effective constructs a utopian vision of postcolonial India’s scientific progress on the global stage despite resource constraints and a low budget. Shonku regards his invention as a collective accomplishment of the Indian masses and argues that his robot is capable of garnering national glory. Shonku’s emphasis on national sentiments points out how post-independence Bengali kalpavigyan focused on “establishing the primacy of India and Indians in the international space” (443), as opined by Chattopadhyay (2016). While German scientist Borgelt claims that “the skill that scientists in Germany had shown in building robots could not be matched by any other country” (The Diary of a Space Traveller 138), Shonku is eager to showcase his robot on the global stage because his robot, despite being created inside a domestic laboratory in India with limited resources and budget, is capable of competing with Borgelt’s robot created in a well-equipped laboratory. David Arnold (2013) in his discussion of postcolonial scientific practices in India during the Nehruvian era argues that “[…] since science stood for authority and a higher form of knowledge, NS [Nehruvian Science] sought to contest Western presumptions of a monopoly over science and to ground modern science in India’s cultural traditions and contribution to world civilization” (361). According to Arnold (2013), science in postcolonial India struggles to regain local ownership and end the legacies of Western hegemony (370). Ray’s (2008) emphasis on the Indianness of Shonku’s robot Robu and representation of conflicting dynamics between Indian and Western scientific invention through the contrast between Robu and Borgelt’s robot point out the unacknowledged trajectory of non-Western scientific advancement after the end of the colonial era. Borgelt designed his robot as his mechanical doppelganger and the robot eventually ousted the original Borgelt. The robot, posing as Borgelt, meets Shonku and Paumer and even investigates Shonku’s robot, Robu. While Shonku’s robot adheres to Asimov’s “three laws of robotics” and continues to remain subservient to his human creator, Borgelt’s sentient robot demonstrates the feasibility of technological singularity by taking control of his human creator. Shonku is constantly conscious of upholding his national identity, and that is why, when Borgelt’s robot inquires, “Herr Robu, what is my name?” (The Diary of a Space Traveller 146), it remains silent, and Shonku states: “It wasn’t just my own pride and self-esteem that lay
in smitereens in the presence of two well-known German scientists. It was the prestige of Indian science that was at stake” (The Diary of a Space Traveler 146). Robu’s silence here does not imply Shonku’s failure to keep Robu answerable; rather, it implies that Robu remains silent because it is observant enough to comprehend that the questioner is not scientist Borgelt but his mechanical look-alike. This act demonstrates that Shonku’s Indian robot outperforms Borgelt’s European robot in terms of emotional intelligence and reliability. Borgelt’s robot, masquerading as Borgelt, makes an offer to purchase Shonku’s robot due to its mathematical ability. But Shonku is adamant about not selling his invention, as his scientific endeavors are never driven by commercial gain and his notion of nation and nationhood galvanize a sense of collective identity. In the postcolonial context, this assertion of national and collective identity becomes a mode of anti-colonial resistance. John McLeod (2012) comments that:

During several struggles against colonial rule in the twentieth century, the myth of the nation has proved highly potent and productive. It was popular with a variety of independence movements because it served many of their intellectuals and leaders as a valuable ideal behind which resistance to colonialism could unite. (75)

When Borgelt’s robot threatens to murder Shonku, Robu intervenes and decapitates the wicked robot, rescuing not only Shonku but also the original Borgelt. Not only does the story glorify India through the contrast between a compassionate Indian robot and a “savage” European robot, but it also highlights a shift in perspective from national to cosmopolitan.

While postcolonialism acknowledges the importance of third world countries’ self-representation, it also demonstrates a tendency toward internationalism. Decolonial thinker Frantz Fanon (1963) advocates “national consciousness” over nationalism: “National consciousness, which is not nationalism, is the only thing that will give us an international dimension” (Fanon 1963, 247). Fanon’s (1963) concept of national consciousness focuses on reclaiming of pre-colonial past and acknowledging the native identity but it also shows a movement toward international solidarity. Fanon (1963) observes the interconnection between national and international consciousness and propagates that national liberation leads the nation to play its part on the global stage instead of remaining aloof (247). Chattopadhyay (2016) recognizes the manifestation of the international dimension of the scientific worldview in Professor Shonku stories in the form of scientific collaboration between Shonku and his scientist friends from other countries (444). The story “Professor Shonku and Robu” shows a similar pattern of international scientific collaboration. Though Robu is an Indian scientific invention, Shonku’s German friend Paumer upgrades Robu by installing “some extra gadget” into its head to establish a telepathic link between Robu and Shonku (The Diary of a Space Traveller 155), and this helps Robu to successfully save Shonku from being attacked by Borgelt’s robot. Thus, the collaboration between Indian scientist Shonku and German scientist Paumer results in the final version of Robu. Chattopadhyay (2016) recognizes the presence of “universal” and “particular” in Shonku stories: the universality of science is combined with the particularity and historical imagination of the author (443). In “Professor Shonku and
Robu,” the particularity of Shonku’s Indian identity is combined with the representation of science as a cross-cultural and universal enterprise that dismantles the notion of western centers and non-western peripheries.

3. Professor Shonku, indigenous epistemology and alternative modernities

Postcolonial SF is distinguished by the polyphonic coexistence of diverse indigenous epistemic traditions that counter the monolithic rhetoric of the western techno-scientific approach. Langer (2011) argues that “A postcolonial view of science fiction therefore foregrounds the concept that indigenous and other colonized systems of knowledge are not only valid but are at times more scientifically sound than is Western scientific thought” (130–131). This argument highlights that postcolonial SF emphasizes the idea that indigenous and other colonized knowledge systems are viable and scientifically correct, and Indian SF speculates on and extrapolates futurist possibilities derived from indigenous epistemological branches, undermining the colonial scientific knowledge hierarchy. Banerjee (2020) interprets the trend toward centralizing Indian epistemological practices in Indian SF as a form of resistance to what Gayatri Chakravorty Spivak refers to as “epistemic violence,” or the subjugation of “a whole set of knowledges that have been disqualified as inadequate to their task or insufficiently elaborated: naïve knowledges, located low down on the hierarchy, beneath the required level of cognition or scientificity” (Banerjee 66). Spivak’s notion of “epistemic violence” refers to the process of silencing or invalidating the knowledge systems associated with the marginalized people of the colonized countries. While colonial discourse promotes European methods of knowledge as rationalistic and scientific, discrediting non-European knowledge, Indian SF generates a variety of counter-narratives to Western scientific discourse. According to Banerjee (2020), “in Indian SF, multiple systems of knowledge stake a claim to this underlying epistemic role” (16), and Ray’s Professor Shonku stories combine the European legacy with a Vedic one (75). Ray’s Shonku stories feature a variety of instances of Indian and other non-Western epistemological traditions and techno-scientific cultures that are presented as scientific in the same way as their Western counterparts.

Stories such as “The Tree with Golden Leaves” from The Final Adventures of Professor Shonku (2020) and “The Unicorn Expedition” from The Unicorn Expedition & Other Stories (2004) depict instances of indigenous knowledge associated with ancient institutions and knowledge systems. These stories legitimize local and indigenized knowledge emerging from the third world peripheries as valid and scientific as western formal sciences. Shonku recounts the background of the invention of miracurall, a panacea for any incurable disease that Shonku uses several times in the story, “The Tree with Golden Leaves” or “Swarnaparnee.” Shonku admits that the substance is not invented by him in his laboratory but rather based on the indigenous wisdom of a local sadhu (sage) named Tikribaba, who meditates beneath a banyan tree. The sage uses his intuitive abilities to diagnose Shonku’s father’s ailment and prescribes Swarnaparnee, a golden-leaved medicinal herb that grows in a remote part of Kasauli, Himachal Pradesh in India. Tikribaba mentions that he learns about the medicinal herb from his “guru,” who gives him a concoction of milk and the powder prepared from the golden leafed plant that miraculously cures his jaundice. Thus, the knowledge about the incredible elixir was a verbally transferred knowledge among the mystic community who were associated with
the forest. In the colonial discourse, Western sciences are perceived as absolute fact, while spirituality and mysticism connected with third world nations are considered superstitious and primitive. Here Tikribaba’s competence in herbal medicine transcends such European modernist preconceptions. Shonku’s father, Tripureswar, a practitioner of the Ayurvedic school of natural medicine, regards Ayurveda as a counterpoint to western medical science, demonstrating a keen interest in the medicinal properties of herbs and placing a great deal of importance on Tikribaba’s wisdom. In a conversation with Shonku about the medicinal herb, his father states that, “It [swarnaparnee] is mentioned in the ancient Sanskrit book of Ayurvedic medicine, the Charak Samhita” (The Final Adventures of Professor Shonku 191). In the story, the sage’s indigenous wisdom and Shonku’s father’s profession as a skilled Ayurvedic doctor revive a component of the ancient Indian system of medicinal knowledge. Here Shonku’s father echoes Deepak Chopra’s (1995) observation on “the Indian tradition of Ayurveda” which is “the oldest system of health-related knowledge in the world. Ayurveda – which in Sanskrit means ‘science of life’ – is the most comprehensive system of mind/body medicine ever devised. It offers not only a great wealth of theoretical knowledge, but also practical techniques for achieving better health” (Boundless Energy 14). At the same time, the sage Tikribaba’s knowledge about the medicinal properties of herbs might be interpreted as what Grace L. Dillon (2007) refers to as “Indigenous scientific literacies.” Dillon (2007) defines “indigenous scientific literacies” as “those practices used by indigenous native peoples to manipulate the natural environment in order to improve existence in areas including medicine, agriculture, and sustainability. The term stands in contrast to more invasive (and potentially destructive) western scientific method” (25). Indigenous scientific literacy is grounded on a spiritual sense of interconnectedness between humans and nonhuman entities such as plants and animals. It is worth noting that substantial scientific research on Ayurveda and Unani Tibb practice during the colonial period apparently started in the 1990s. Later Anil Kumar, Madhulika Banerjee, and Maarten Bode among others analyze the growth and development of mass-produced Ayurvedic and Unani remedies, with a particular emphasis on the indigenous systems’ rebuttal to colonial biomedicine (Hardiman, Indian Medical Indigeneity 266–67). In this story, the ayurvedic medicinal herb prescribed by the sage is an example of indigenous science that is not originally formed on laboratory experiments as is the case with western formal sciences but rather originated from human contact with the natural world.

Science is an important determinant of modernity and advancement; speculations about alternate methods of scientific knowledge production cast some doubt on the European conception of modernity and promote “alternative modernities.” According to Arif Dirlik (2013), “The significance of claims to alternative modernity lies else-where: in the assertion of the right of different societies to define modernity. The Euro/American hubris that modernization must follow the course of Westernization has been questioned and challenged all along” (8). Dirlik (2013), concept of “alternative modernity” challenges the conventional view of modernization as synonymous with westernization and charts many alternative modernist trajectories. Swarnaparnee, an Ayurvedic medicine, is the perfect embodiment of alternative modernism of medical science in the story “The Tree with Golden Leaves.” Shonku embarks on a journey to Kasauli in search of swarnaparnee; he uproots the herb and plants several branches of it in his garden. The story contains numerous examples of the swarnaparnee’s efficacy in cases where western
medical methods fail to cure certain diseases. The first instances include the healing of Shonku’s neighbor, Joygopal Mitra, and several other inhabitants of Shonku’s hometown, Giridih. However, Shonku is not satisfied with the traditional method of mixing the powdered leaves with milk; he decides to prepare plenty of “pills” from the leaves by using a machine and a tube. Interestingly, Shonku combines the sage’s indigenous knowledge with methods associated with Western medical science. Shonku’s scientific research projects hybridization of indigenous knowledge and western methods. In Shonku’s laboratory, the swarnaparnee becomes *miracurall* pill and makes its way to the western world, generating concern and a sense of awe among the European medical community. Shonku’s scientist friend Jeremy Saunders gets cured of an incurable form of cancer after taking the pill. Saunders comments, “Is this an Indian trick? This has created an uproar in the medical fraternity in London. What tablet did you send me?” (*The Final Adventures of Professor Shonku* 201). The last part of the story portrays the entry of the pill into Nazi Germany before the Second World War. The pill cures Heinrich Steiner, a Jewish Indologist and Sanskrit scholar who have been targeted by the Nazis. Shonku’s medicine gains widespread popularity in Germany to such a point that Hermann Göring, a Nazi leader, captivates Shonku and tries seizing the pills for curing his problem of excessive sweating. Göring attempts to extort the pills from Shonku, replicate them in German laboratories and exclusively use them for curing the ailments of people belonging to the Nazi party. Shonku somehow escapes and prevents the indigenous knowledge to be monopolized by the Nazis for their selfish cause.

Sandra Harding (2008) posits the existence of numerous sciences with distinct cultural legacies that reject Western science’s exclusivity and chauvinism. She opines: “These scientists, scholars, and activists also wanted to provide a counter-narrative to the triumphalist Western account of Third World development policies. In the triumphalist narrative, transfer of Western sciences and technologies and their rationality to the ‘underdeveloped societies’ would bring social progress to the Third World” (130). She also points out the significance of traditional environmental knowledge (TEK) and indigenous knowledge (IK) as a counter-narrative to the triumph of technological achievement of the global North (138). In this narrative, the pill emerges as a feasible alternative to Western medical schools. Saunders becomes curious about the chemical composition of the pill so that it can be produced and circulated in the market. He analyses the pill in the laboratory but fails to determine the composition of one particular element, indicating that the pill cannot be synthesized artificially in the laboratory. Thus, the pill becomes a symbol and example of indigenous environmental knowledge that cannot be replicated by western science.

The term “European modernism” refers to the Eurocentric dominance of the non-European world achieved through colonization. Bill Ashcroft (2009) argues as follows:

Modernity emerged at about the same time as European nations began to conceive of their own dominant relationship to a non-European world and began to spread their rule through exploration, cartography and colonization. Europe constructed itself as modern and constructed the non-European as traditional, static, and pre-historical. (86)

Ashcroft (2009) argument refers to the relationship between the formation of the European concept of modernity and the portrayal of non-European nations as primitive and bereft of modernity. The non-European world’s alternative epistemologies emerge as
counter-narratives to the Eurocentric concept of modernity. As portrayed in the story “The Unicorn Expedition,” these alternate epistemologies operate through indigenous knowledge associated with ancient knowledge systems that remain unrecorded and unacknowledged in colonial discourse. In this story, Shonku is seen traveling to Tibet with his neighbor, Avinash Babu, and scientist friends, Jeremy Saunders and Wilhelm Kroll, to solve the mystery of the unicorn and flying Lama recorded in the diary entries of recently demised English explorer Charles Willard. Initially, Shonku associates Willard’s experience of flying with a lama to “yogic meditation”: “Did Willard fly with the help of such a yogi?” (The Unicorn Expedition & Other Stories 198). However, during the expedition, Shonku and his comrades go to a cave named “Thokchum Gumpa” mentioned in Willard’s diary and find a scientific manuscript, titled “Uddayansutram” or “A Treatise on Flying” in the hand of a deceased Lama. The Sanskrit manuscript contains a detailed description of the technology of flight and “describes how a person can be airborne by purely chemical means” (The Unicorn Expedition & Other Stories 223). Shonku states that “I had heard of the treatise. In Buddhist times, there was a great scholar in Taxila in India, known as Vidyut-dhamani. He was the one who composed the treatise and left for Tibet shortly thereafter. He never came back to India, and no one in India ever learnt about his scientific researches” (The Unicorn Expedition & Other Stories 224). As the source of miracurall is documented in the ancient classic Charak Samhita; the technology of flying is documented in the fictitious ancient text entitled Uddayanasutram. The story points out the validity of non-European ancient manuscripts as documents of scientific research and mode of alternative modernities.

Warwick Anderson (2002) associates the alternative modernities with postcolonial science and technology studies and rejects the “diffusionist hypothesis” of scientific development that claims that science spreads from Western centers to the non-Western peripheries (648). Anderson (2002) further argues that “perhaps the strongest challenge to diffusionist theories of techno-scientific development, to the assumption that modern science has simply spread from a centre, comes from those critics of development practising anthropology of the modernities mutating beyond Europe” (650). Shonku’s comments about Buddhist scholar Vidyut-dhamani and the ancient manuscript of Uddayanasutram point out that scientific researches are prevalent in ancient India long before colonial intervention. After Vidyut-dhamani’s journey to Tibet, Tibetan lamas, who are usually associated with religion and mysticism, learn about Vidyut-dhamani’s technique and practice his technology of flying. The story, “The Unicorn Expedition,” here projects that while the ancient school of Taxila emerges as a counterpart of western scientific institutions, the technology of flying is presented as a scientific novum, not a supernatural or magical trick. In the manuscript, Vidyut-dhamani, mentions that flying was possible by the use of an imaginary component called “ngmung” that is effective in reducing the weight of human beings, allowing them to glide in the wind. The manuscript also contains an elaborate description of the ingredients required to prepare “ngmung.” Shonku regrets that the mentioned ingredients are unfamiliar to him and thus he will not be able to replicate the lost ancient technology. He assumes that the dead Lama was aware of the mentioned ingredients and applied the scientific methodology of Vidyut-dhamani to prepare “ngmung” and thus he is the one with whom Willard has flown. Shonku later realizes that the lama instilled the prepared ingredient in the sole of eight pairs of Tibetan ornate high-boots found in the monastery.
to fly effectively: “The manuscript mentions a connection between the substance and the sole, or underside of the foot. I’m sure the lining of the boot has a coating of ngmung” (The Unicorn Expedition & Other Stories 228). Markham, a fraud and thief, accidentally became airborne during his attempt to steal Lama’s boots. Later, Shonku and his companions use the boots found in the monastery to fly through a high wall from Tibet to the fictional realm of Dung-lung-do. It is worth noticing that “as the nation moves towards more technological modernization, [these stories] disseminate a scientific discourse by appropriating the non-rational tropes of mysticism [that] question the ethics of science” (Nandi, The Postnational Fantasy 84) in the Western context.

Bodhisattva Chattopadhyay (2017) views the collective body of indigenous knowledge as something akin to Western science, which he refers to as “native science,” which plays a significant role in kalpavigyan (113). The technique of flying appears in the ancient manuscript and then becomes a type of native science for the Tibetan lamas who use it secretly outside the ambit of Western knowledge. The scientific extrapolations in “The Tree with Golden Leaves” and “The Unicorn Expedition” reinforce the validity of indigenous scientific knowledge that has been discredited by western norms and processes of knowledge production. These two stories bring out the fact that “development has relied exclusively on one knowledge system, namely, the modern Western one. The dominance of this knowledge system has dictated the marginalization and disqualification of non-Western knowledge systems” (Escobar (1995)13). Escobar’s arguments are aligned with the Foucauldian notion of knowledge and power; the legitimacy of the western knowledge system is grounded on geopolitical power politics. By dismantling the Eurocentric hegemony of the knowledge system through the incorporation of elements from third-world alternative sciences, these two stories explore various alternative roots of science and technology that are not connected with the West. By projecting scientific practices outside of Europe, these narratives subvert the diffusionist concept of technoscience and chart alternate paths to scientific and technological modernity. Bodhisattva Chattopadhyay (2016) expresses it succinctly in this context:

From Shonku onward, one can notice a shift in the genre of kalpavigyan, in that the mythological, the unnatural, and the paranormal begin to be reabsorbed into narratives as sources of alternative hidden knowledge, and the gyan-vigyan relation/opposition becomes more perceptible in terms of advanced science, ancient science, or counter-science.

4. Professor Shonku and “mythologerm”

In Indian SF, mythical, mystical, and folkloric themes, as well as indigenous epistemological traditions, serve as tools and techniques of “cognitive estrangement”5 that challenge the rational framework of western science as well as SF. Several studies in the field of Indian SF (Banerjee (2020), Chattopadhyay (2016, 2017) emphasize the importance of juxtaposing mythic and scientific elements in postcolonial science fiction in general and Indian science fiction in particular. Suparno Banerjee (2020) distinguishes between Hindu and non-Hindu mythological frameworks in Indian SF; he traces the origins of mythic traditions in both Hindu epics and Puranas, as well as Buddhist and Islamic religion and philosophy (86). Notably, Professor Shonku’s stories incorporate mythic aspects from a range of cultures, and this inclusion of mythic allusion is not exclusive to
Hindu or Indian religion and philosophy. The story “Shonku’s Date with History” from The Final Adventures of Professor Shonku (2020) depicts the mythical figure of bhoot (ghost) as being associated with a technological invention based on a western scientific experiment. Professor Shonku, in collaboration with German scientists Wilhelm Kroll and Rudolf Heine, invents the machine named compudium or “computerized medium.” They receive a financial grant from Psychic Research Institute in Munich for the research. Shonku states that “Our sole mission was to set up a mechanical and artificial medium to establish contact with the spirit world in place of a real live medium” (The Final Adventures of Professor Shonku 99). Shonku studies the behavior of 350 people who function as “medium” in the sèances or planchettes to replicate their qualities in his scientific device. He invokes the spirits of Adolf Hitler, Nawab Siraj ud-daulah, William Shakespeare, a scientist named Professor Hubermann, a Stone Age man, and a prehistoric Pterodactyl through the machine. Like any of Shonku’s other inventions, compudium becomes immensely popular in the western scientific community. Shonku and his comrades organize multiple demonstrations of the machine in several scientific institutions which are attended by diverse noteworthy personalities as well as people from all walks of life. When newspapers and some scientists question the scientific validity of the device, Shonku’s scientist friend Heine further modifies the machine so that the physical presence of the spirit can be seen by the viewers. In their next demonstration, they call the spirit of an extinct pterodactyl that existed fifteen million years ago. After seeing the physical form of the creature, the entire audience was convinced about the scientific feasibility of compudium and uttered: “Hail, Compudium, Hail Science” (The Final Adventures of Professor Shonku 114). The story “Shonku’s Date with History” delineates intriguing instances of the confluence of mythology, ideology and technology, and the juxtaposition of science and anti-science, rational and supernatural, mythical and technological through the depiction of compudium as a scientific invention. This intersection of mythology, ideology/materiality, and technology in Indian SF exemplifies Sami Ahmed Khan’s (2021) notion of “transMIT thesis” where “M” stands for mythology, “I” for ideology and “T” for technology. Sami Ahmed Khan’s (2021) argues that “while the transMIT thesis does not substitute myth for SF, it does celebrate a fusion of the mythic, science fictional and scientific” (Star Warriors of the Modern Raj 98), and through the use of mythic elements the writers of Indian SF engage with contemporary politics and agendas (111).

Jessica Langer (2011) considers mythology as a subversive mechanism of asserting indigenous myths and cultural memories associated with the (pre)colonial history and heritage that colonization is incapable of uprooting:

The overlay of science fiction on folktale, the mosaicism of science-fictional and mythological tropes, or the coexistence of clearly scientific and clearly divine elements within a work does not capitulate to the colonial power, but rather demonstrates that cultural memory is not in fact destroyed by the discourse of progress that seeks to situate it in the past and in pure myth. Instead, as these works assert, indigenous stories – and indigenous peoples – exist and remain, and thrive, even within a discourse that seems oppositional. (136)

The episode of conjuring the spirit of Siraj ud-daulah, the last Nawab of Bengal, through the compudium reveals a cultural memory associated with the (pre)colonial past. In his diary, Shonku mentions that “I checked with Siraj about the Andhakup murder (Black
Hole of Calcutta, 1756). With a lilt in his voice, Siraj said he knew nothing about this and that the British had spearheaded this horrible campaign only to malign him! Spirits do not lie” (The Final Adventures of Professor Shonku 101). The incident of “Black Hole of Calcutta” refers to the “alleged death by suffocation of 123 Europeans taken prisoner by Nawab Siraj-ud-daulah of Bengal in 1756” (The Black Hole of Empire xi). Chatterjee’s (2012) discussions focus on how the incident of Black Hole retold in multiple colonial texts, often contradictory to one another, shaped the grand narrative of colonial history. The incident was represented in colonial texts to point out the savagery of the Indian subjects and justify the colonial rule. In the story, “Shonku’s Date with History” the mythical device of ghost challenges the colonial historiography by projecting a petite narrative voiced by Siraj ud-daulah himself. After his encounter with the spirit, Shonku becomes assured that the accounts of atrocity mentioned in the colonial texts were fabricated by the British to dishonor Siraj ud-daulah. In Professor Shonku stories, the ghosts and spirits, for example, not only provide fantastical components to the plot but also operate as a technological novum and method of ideological discourse.

Though the technique of flight is outlined in scientific terms in the story “The Unicorn Expedition,” the final section of the story illustrates the characters’ voyage to the mythical realm of Dung-lung-do, where wondrous creatures from diverse mythological stories coexist. Shonku and his companions, outfitted in the Lama’s boots, fly to the Dung-lung-do, which remains concealed from the real world of Tibet by a high wall. Dung-lung-lo is depicted as a fairy-tale realm; it is surrounded by unknown specimens of colorful trees containing exquisite fruits and flowers. Shonku observes in his diary entry:

We watched a Phoenix being consumed by flames and a new Phoenix rising from its ashes and flying off towards the sun. We saw the Gryphon, the Simurgh of Persian legends, the Anka of the Arabs, the Nork of the Russians, and the Feng and the Kirne of the Japanese … We also saw a four-tusked elephant which could only be Airavat, the mount of the Hindu god Indra. (The Unicorn Expedition & Other Stories 234)

After crossing a region, Shonku and others hear a “blood-curdling roar” only to realize that they have “come to the region of legendary demons and rakshasas, a common feature of fairy tales of all nations” (The Unicorn Expedition & Other Stories 234). While the boots symbolize the advancement of science and technology, the mythical creatures and mythological inclusions emerge as alternatives to both the frameworks of western scientific discourse and the generic boundaries of western SF. This nexus of myth and science refers to the concept of ”mythologerm,” a term used by Bodhisattva Chattopadhyay (2016) in the context of Bangla kalpavigyan. The use of mythologerm blurs the distinction between the scientific and the fabulous in Bengali SF. Bodhisattva Chattopadhyay (2016) argues that: “This tendency to continually rework the history of science through the use of the mythic, or to use the mythic as a source of alternative or unknown or advanced science, or to use the mythic as a hinge to elaborate a difference between one kind of SF and another, is what I call the mythologerm” (437). The mythological creatures mentioned in the story are not restricted to Hindu mythology but expand to include the creatures of Chinese, Persian, Arabian, and Japanese mythologies. They even find unicorns that are featured in both “western mythology and seals of Mohenjadaro” (The Unicorn Expedition & Other Stories 235). The inclusion of specific
mythology derived from different indigenous cultural traditions imparts a sense of cultural uniqueness and so distinguishes one nation’s SF from another. Thus, the mythical allusions indigenize the genre of Indian science fiction and call into question the generic boundaries of western SF.

The story exemplifies the transition from the genre of SF to fantasy, which is a significant element of Indian SF. Christin Hoene (2020) interprets the coexistence of the miraculous and scientific elements in Jagadish Chandra Bose’s “Runaway Cyclone” as an example of “magical realism” that subverts “the colonial politics of western science in western SF” (7). Hoene (2020) continues by arguing that both tall tales and magical realism serve the same purpose in colonial-era Bengali SF: to highlight a dissident model – colonial enlightenment and scientific knowledge, or, to put it another way, an attempt to subvert the epistemological authority of Western science in the framework of colonialism (Hoene 8–9; Bhattacharya and Hiradhar [2014] 286). The presentation of a large array of mythological creatures as real in “The Unicorn Expedition” is an instance of magical realism, which is crucial in postcolonial writings. Shonku’s friend Kroll comments that “This is the real world. There is ground under our feet, we can touch the leaves with our fingers, smell the flowers with our noses” (The Unicorn Expedition & Other Stories 232–233). In the story, the magical infiltration of the realm not only upholds the characteristics of magical realism but also identifies it as a postcolonial strategy through which “the rational, linear world of Western realist fiction is placed against alternative narrative” by invoking the local tradition of the mythic, the legendary and the magical (Ashcroft et al., Post-colonial Studies 118-119). The encounter between the scientists and the mythical creatures in a fantastical realm destabilizes the rational narrative world of western SF. In the postcolonial context, the appropriation of science through the inclusion of such indigenous mythic elements points out the characteristic hybridity of postcolonial literature. The juxtaposition of the mythical, supernatural, magical, and unfathomable with the rational framework of scientific inventions in “Shonku’s Date with History” and “The Unicorn Expedition” demonstrates that the fusion of Euro-American SF’s “cognitive mode” and indigenous tradition of “Indian myths, legends, ghost stories, and folktales” (Banerjee 21) renders Indian SF essentially postcolonial.

5. Conclusion

Satyajit Ray’s Professor Shonku stories appropriate the Western genre of SF and embody the subversive potential of Bengali kalpavigyan and Indian SF. The emphasis on the Indian identity of Professor Shonku and the advancement of his scientific research and inventions compared to his European counterparts delineate the utopian futuristic imagination associated with newly decolonized India. Professor Shonku’s stories covered in this article navigate “the trajectory of scientific fantasy in a postcolonial nation” (Nandi, The Postnational Fantasy 84) that progresses from its early phases of nation formation to a cosmopolitan identity. Professor Shonku’s futuristic inventions and achievements in the field of physics, chemistry and medical science are associated with the national pride of India. The projection of Indian technological growth through Shonku’s innovations and achievements scrupulously aims to counteract the colonial discourse’s orientalist and exoticized depiction of India.
These stories not only criticize and distort the Western imperialist mind-set with sarcasm, indignation, wit, and amusement, but also with the utmost respect, sincerity, and appreciation for the genre of Indian SF, which facilitates us to envisage other ways of conceiving and acknowledging India in a global context.

Notes

1. Edward Said (1994) uses the term “contrapuntal reading” to refer to the practice of taking into account the process of imperialism and resistance to it while reading a literary text (66).
2. Bill Ashcroft, Gareth Griffith, and Helen Tiffin (2002) use the term “writing back” to refer to the resistance asserted by the postcolonial writers through the appropriation of colonial texts and adoption of several subversive strategies (32).
3. “Space opera” and “lost race narrative” are early sub-genres of Western SF which contain the subtexts of colonialist fantasy in the form of encounters between white explorers and indigenous or extraterrestrial aliens. According to Andy Sawyer (2009), “Stereotyped space opera has minimal characterization, and vast settings of interstellar conflicts between clearly defined ‘good’ and ‘bad’ sides typically human and alien…” (The Routledge Companion to Science Fiction 505). In a typical “space opera” narrative, the hero sets out on an adventurous, extraterrestrial journey on a spaceship and encounters bizarre alien species. The lost-race narratives deal with the similar scenario of earth-bound encounters between explorers and “a previously isolated race or civilization in an exotic, nearly inaccessible setting” (Rieder 21).
4. Darko Suvin (1979) in the chapter “SF and the Novum” of Metamorphoses of Science Fiction writes: “SF is distinguished by the narrative dominance or hegemony of a fictional novum (novelty, innovation) validated by cognitive logic” (63). According to Suvin, the concepts of technological extrapolation depicted in SF must be comprehensible in terms of scientific viability.
5. According to Suvin (1979), “SF is, then a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition” (7–8). The defamiliarized settings and futuristic or technological imaginations function as modes of cognitive estrangement.

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Notes on contributors

Goutam Karmakar, Ph.D. (English), is an Assistant Professor of English at Barabazar Bikram Tudu Memorial College, Sidho-Kanho-Birsha University, Purulia, West Bengal, India. He is also an NRF Postdoctoral Fellow at the University of the Western Cape, South Africa. His forthcoming and recently published edited volumes are The Poetry of Jibanananda Das: Aesthetics, Poetics, and Narratives (Routledge, forthcoming), Narratives of Trauma in South Asian Literature (Routledge, forthcoming), The City Speaks: Urban Spaces in Indian Literature (Routledge, 2022), and Religion in South Asian Anglophone Literature: Traversing Resistance, Margins and Extremism (Routledge, 2021). He has been published in journals including Journal of Environmental Planning and Management, MELUS, South Asian Review, Journal of Graphic Novels and Comics, Interdisciplinary Literary Review, Journal of Gender Studies, Journal of Postcolonial Writing, National Identities, Nationalism and Ethnic Politics, Journal of Narrative and Language Studies, Asian Journal of Women’s Studies, and Asiatic among others.
Tanushree Ghosh is currently working as a State Aided College Teacher in the Department of English at Kabikankan Mukundaram Mahavidyalaya, West Bengal. She has completed her M.Phil. in English literature from the University of Calcutta, Kolkata. Her dissertation focuses on the genre of postcolonial science fiction. Her areas of interest include speculative fiction, posthumanism, graphic narratives and postcolonial literatures.

ORCID

Goutam Karmakar [http://orcid.org/0000-0002-9119-9486]

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