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Everyday Interpretations of Transitions to Electricity in Colonial Calcutta c. 1875–1940s

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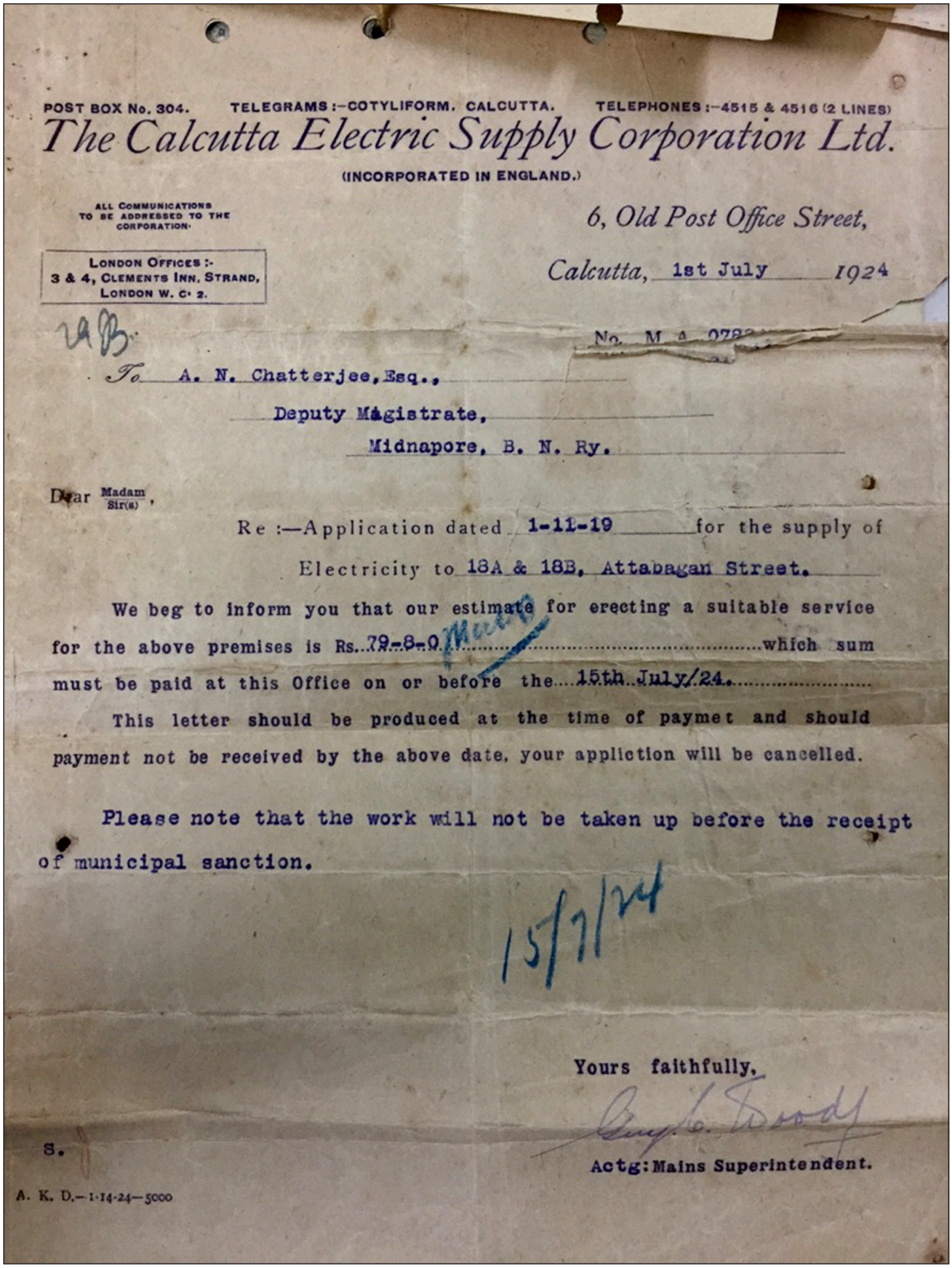
This paper explores some of the ways in which a range of elite and non-elite individuals and social groups in late-nineteenth and early twentieth cetury colonial Calcutta mapped their conceptions of everyday life, material cultures, energy practices, and class and social identities onto electrical technologies and means of illumination and ventilation. Using a variety of sources, including newspapers, literary texts and personal records, it explores the relations between class, consumption and transitions to electric supply and technologies, and delves into the dynamics of the Bengali domestic sphere, especially with regard to gender issues and changing social roles for middle-class men and women. In capturing the everyday experiences of these historical actors, the paper seeks to present the interrelations between energy transitions and ideologies, particularly Bengali nationalism.

Introduction

During my research trip to Calcutta in 2017, I visited distant relatives in their old family home on Chandibari Street. For almost 110 years, and through several generations, the Chatterjee family has called this house their home. The house itself goes back to the early decades of the twentieth century. It has been remodeled several times to incorporate new amenities such as piped water, gas and electricity. Sections of the house have also been refurbished and reconstructed, but the basic frame of the house has changed little.

Mr. Achintya Nath Chatterjee — the current owner of the house — and I talked about the changing dynamics of spaces within the house, about the introduction of electric supply, and about the varied experiences of energy use, lighting and ventilation. Our conversations in that instance drew on oral recollections of family life with servants, hand-pulled fans (punkahs), and gas and oil lamps alongside electrical technologies. As we talked, Mr. Chatterjee brought out an old file with a few crumbling, browned pages. The file contained, amongst recent electric bills, documents that outlined the official processes through which Mr. Chatterjee's grandfather — Mr. Ambu Nath Chatterjee, then Deputy Magistrate of Midnapore — applied for and gained access to electric supply for the house.

On 1 November 1919, Mr. Ambu Nath Chatterjee signed an application to the Calcutta Electric Supply Corporation (CESC). CESC, however, did not operate in the area at the time of Mr. Chatterjee's application. Domestic electric supply followed the paths that public electric supply laid out. CESC, in several advertisements in the early 1900s, mentioned that they could only supply electricity to houses "in streets with underground mains."[1] Public electric supply, at least for the first three decades of the twentieth century, was restricted to areas of importance to the colonial administration, and areas of European and Bengali elite residences. Any extensions to CESC's area of operation were also bookended by extensive discussions in the Municipal Council and negotiations over contracts both with CESC and the Oriental Gas Supply Company.[2] What we can infer from Mr Chatterjee's bills and applications, nevertheless, is how long it actually took for some areas not far outside what historians have termed the "White Town" to access electric supply.[3] Attabagan Street was only around 3 miles north of CESC's generating station at Emambagh Lane, but it took them almost five years to finally approve Mr. Chatterjee's initial application. On 1 July 1924, CESC demanded a payment of Rs.79 and 8 annas for "erecting suitable service." The approval, however, did not mean that Mr. Chatterjee's house could have access to electric supply; the letter, right at the bottom, stated "that the work will not be taken up before the receipt of municipal sanction" (**Figure 1**). Another receipt dated 22 September 1924 from CESC showed the Rs.100 security deposit that Mr. Chatterjee needed to pay to initiate an agreement with CESC (**Figure 2**).



POST BOX No. 304. TELEGRAMS :—COTYLIFORM. CALCUTTA. TELEPHONES :—4515 & 4516 (2 LINES)

The Calcutta Electric Supply Corporation Ltd.

(INCORPORATED IN ENGLAND.)

ALL COMMUNICATIONS TO BE ADDRESSED TO THE CORPORATION.

LONDON OFFICES :- 3 & 4, CLEMENTS INN, STRAND, LONDON W. C. 2.

6, Old Post Office Street,

Calcutta, 1st July 1924

No. M ▲ 078

To A. N. Chatterjee, Esq.,
Deputy Magistrate,
Midnapore, B. N. Ry.

Dear Madam Sir(s),

Re :—Application dated 1-11-19 for the supply of Electricity to 18A & 18B, Attabagan Street.

We beg to inform you that our estimate for erecting a suitable service for the above premises is Rs. 79-8-0 which sum must be paid at this Office on or before the 15th July/24.

This letter should be produced at the time of paymet and should payment not be received by the above date, your appliction will be cancelled.

Please note that the work will not be taken up before the receipt of municipal sanction.

15/7/24

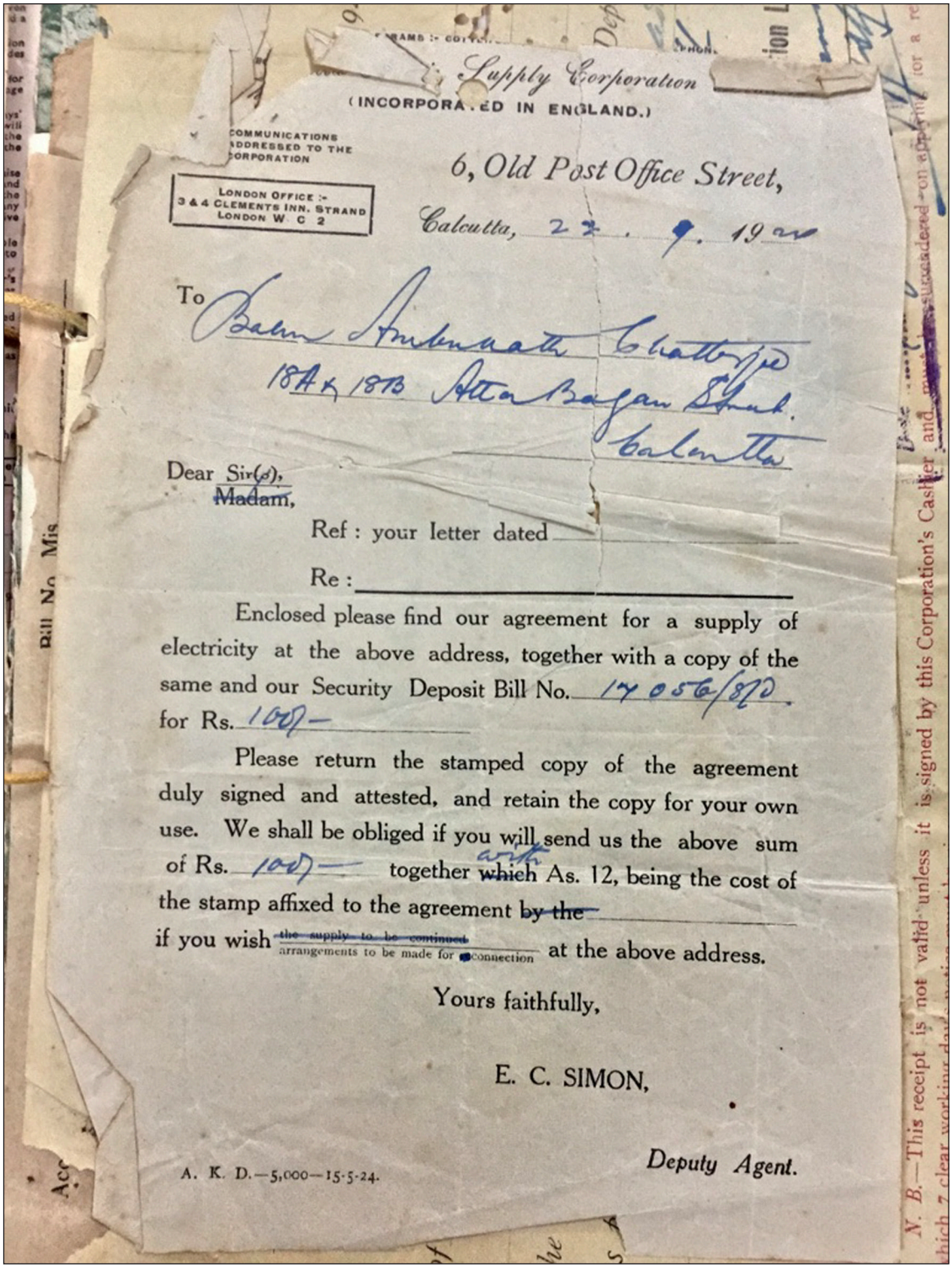
Yours faithfully,

Actg: Mains Superintendent.

S.

A. K. D.—1-14-24—5000

Figure 1: Receipt for deposit, 15 July 1924.
Used with permission from Mr Achintya Nath Chatterjee, 18B Chandi Bari Street, Kolkata.



Supply Corporation
(INCORPORATED IN ENGLAND.)

COMMUNICATIONS ADDRESSED TO THE CORPORATION

LONDON OFFICE :-
3 & 4 CLEMENTS INN, STRAND
LONDON W.C. 2

6, Old Post Office Street,
Calcutta, 22. 9. 1920

To
Babu Ambunath Chatterjee
18A & 18B Akur Bagan Street.
Calcutta

Dear Sir(s),
~~Madam,~~

Ref : your letter dated

Re :

Enclosed please find our agreement for a supply of electricity at the above address, together with a copy of the same and our Security Deposit Bill No. 17056/870 for Rs. 100/-

Please return the stamped copy of the agreement duly signed and attested, and retain the copy for your own use. We shall be obliged if you will send us the above sum of Rs. 100/- together ~~which~~ with As. 12, being the cost of the stamp affixed to the agreement ~~by the~~
if you wish ~~the supply to be continued~~ arrangements to be made for connection at the above address.

Yours faithfully,

E. C. SIMON,

Deputy Agent.

A. K. D.—5,000—15-5-24.

N. B.—This receipt is not valid unless it is signed by this Corporation's Cashier and

Figure 2: Approval of application for electric supply, 22 September 1920.
Used with permission from Mr Achintya Nath Chatterjee, 18B Chandi Bari Street, Kolkata.

The Chatterjee family only opened the file in which the documents were archived when they wished to either store their electric bills or examine their expenses over time. However, the fact that the file contained documents from almost a hundred years ago highlights the transactional value of personal archives. Individuals and families create personal archives that include personal income tax forms or bills, Catherine Hobbs notes in her "reflections on the value of records of individuals," in order to record their interactions with organizations, businesses and governments.[4] "An individual creates records to serve his or her needs or predilections or personality," she writes, "not because some law, statute, regulation, or corporate policy says so."[5] That Mr. Ambu Nath Chatterjee and his descendants chose to keep records of their family's initial interactions with the Calcutta Electric Supply Corporation says little about their private personalities, but when juxtaposed with official and journalistic archives, these documents offer glimpses into the everyday experiences of electrical consumers and their interactions with suppliers.

Nevertheless, sat under the breeze of an electric fan and the glow of electric lighting that had become almost invisible in their presence, we were insistently drawing on memories and sensations more than the visual and ephemeral to construct and communicate everyday experiences of energy use, especially of electric supply and technologies.[6] An individual's remembering is influenced by socially and culturally inscribed frameworks and experiences. Memory studies have examined points of reflection as results of "the cerebral, representational, and the cultural", thereby representing memory as occurring "on a point outside the body."[7] Mr. Chatterjee's narratives of transition to electricity, and the consequent urban and domestic transformations are likely to have been influenced by the many representations of, and emphases on electricity's reliability and quality as a source of power, and political mobilizations of electrification as a measure of economic and societal modernization that he must have been exposed to during his lifetime.[8] They could have also been influenced by narratives passed down by family members. Nevertheless, what stood out from our conversations is that electric supply and electrical technologies became part of a set of cultural ideals for domestic life, while also contributing to significant changes in the ways families lived in their homes. In many respects, some histories of electricity in the context of colonial and post-colonial India, too, are underlined with the assumption that since industrialization, urbanization and the modernization of systems of production, communication and transportation — all central to (post-) industrial and post-colonial societies — can be traced to the introduction of electric supply in the early twentieth century. Additionally, since electricity and electrification marked a break with existing forms and sources of lighting and energy, some historians

write histories of electricity as one of radical change resulting from the spread and use of electricity, unfolding towards a path determined by an inevitable modernity. As historians writing under the umbrella of what Sandy Isenstadt terms as "electrical modernism" would claim: "we became modernized in the process of learning to view the world under electric lighting."[9]

The literal and metaphorical invisibility of electricity during my conversations with Mr. Chatterjee allowed for a discussion of its conveniences and "modernity" that were not burdened by the presence of oil lamps or servants pulling punkahs, or the bureaucratic experiences of gaining access to electric supply. It is often the case that when new technologies are introduced, they attract significant attention through experimentations, exhibitions and debates, which make them highly visible. As they become more commonplace, the initial visibility gradually diminishes and, years later, we only remember the introduction of technologies that were once new in terms of their novelty, especially emphasizing the changes they brought in the past to quotidian ways of living.[10] This article is interested in the period of electrical novelty and visibility in late-nineteenth and early twentieth century Calcutta to unravel the meanings inscribed onto electricity by varied social groups and individuals. It examines how such meanings, interactions with and the use of particular technologies were influenced by affects and emotions, and the interplay of affective relations between materiality, and individual and group identities.

Since there are few firsthand accounts of electrical consumers, finding historical records of actual motivations and use of electrical technologies involves searching through esoteric sources as application, bills, literary texts, and the occasional treatise on health and hygiene. Building on such fragmented archives, this article connects the material world with the cultural, encompassing human actions and affects, and electricity's agency in one dynamic tapestry. Through the sections of this article, I take the reader from emotional and affectual discussions of class and consumption to ideas of nationalism and gender mediated by engagements with electrical technologies in public and domestic spaces. To explore these points, I examine the increasingly diverse world of electrical objects, identity politics, spatial environments, and the complex ideological distinctions between public and private spheres. I focus on the introduction of battery-operated and mains-powered electric supply and technologies into Calcutta's public and domestic spaces, and show how the encounter with new means of lighting and power simultaneously enabled hopes and dreams, and introduced new senses of concern, especially through the vocabularies of consumption, perception, taste, and the formation of identities.[11] Here, I apply the metaphor of "braiding" to explore the affective interconnections between material cultures and intellectual

traditions. Borrowing from Projit Bihari Mukharji's study of the modernization of Ayurveda in late-nineteenth and early twentieth century Bengal, this article examines the interactions between electrical objects and the varied ideas of public and domestic spheres as entanglements of diverse contextual threads of constantly changing values and meanings.[12] The braids I discuss here consist of ideas and ideologies about the state and future of society that emerge from electricity and electrical technologies existing within diverse yet interrelated spheres of streets and buildings, books, journals, newspapers, literary societies, theatres, and a vast variety of social groups and individuals.[13]

The *Punkha* Overhead: Class, Consumption and Electricity

The most surprising moment in the chemist and philanthropist Acharya Prafulla Chandra Ray's collection of writings is when, discussing the state of university education in early twentieth century Bengal, Ray refers to the electric fan among the list of luxuries that what he calls "the average college-bred youth" expected to attain easily because of their degrees. He wrote in a letter dated 1910:

> He is also reluctant to go through a period of apprenticeship commencing at the lowest rung of the ladder. The average college-bred youth thinks that to be a businessman he must have a secretariat table and **an electric *punkha* whirling over his head** and a motor car at his office gate. He expects at the very start to have everything made nice and easy for him, with the result that he often ends his career a miserably paid clerk or as a suicide.[14] [emphasis mine]

While the mention of "suicide" is something I address in the third section of this paper, Ray's use of the electric fan is not accidental; it tells us something about the associations between electrical technologies and ideas of civility and wealth by the urban elite and the Bengali middle classes. Several Bengali commentators primarily discussed middle-class aspirations and consumption in language organized around spatial imagery and the material culture within them, with topics ranging from education, gender politics, cultural and political identities, colonialism and nationalism all discussed in material terms. The introduction of electricity and electrical technologies in public and domestic spaces can, then, be examined as what historians of class and consumption have termed "material goods and the [middle-class] attitudes towards them."[15]

The exhibitory culture of the late-nineteenth and early twentieth centuries had become exceptionally effective in influencing the elite and middle classes to adopt battery-operated, and later public electric supply, in their displays of wealth and

influence. Newspapers, both English and Bengali, and colonial and nationalist, followed electrical news in the rest of the world. These news reports were either telegraphically received or reprinted from other newspapers, and appeared amongst other political and social news, pointing to a deliberate assortment of news to cater to different tastes.[16] Nevertheless, these articles, while shaping a transcript of electricity's public utility, also carefully interplayed popular science and mass politics. *The Hindoo Patriot*, a conservative English newspaper, regularly printed/reprinted articles in developments in electric lighting and supply, frequently adding its own interpretations of local governance at the end. While the municipal commissioners did not see any financial benefits in foregoing gas supply, in the few decades following the introduction of public electric supply in 1899, the electrical marketplace grew with several suppliers and engineering workshops manufacturing and importing electric lights and fountains. A cursory glance over newspaper accounts reveals electrical exhibitions or electric lighting being used to illuminate openings of hotels or mills, or even theatrical performances.[17]

Electric lighting depended on the complexion, motivations and wealth of the local elite who charted the identity of electricity as a "modern" technology. The installation and staging of electric lighting as a spectacle mattered to the Bengali middle-class gentlemanly, or *bhadralok*, elite who sought new means of superfluous consumption as marks of social and class identities. This is particularly evident in the ways in which electric lighting, from the 1880s onwards, became a part of elite *bhadralok* weddings in Calcutta. Through the 1880s and to the early 1900s, news reports on the installation of electric lighting in elite marriage processions were commonplace.[18]

As Rochona Majumdar has discussed in *Marriage and Modernity*, *bhadralok* marriages and weddings in the late-nineteenth and early twentieth centuries underwent cultural, material and religious transformations based on changing ideas of "modernity" which, as she states, stemmed from "urban life, Western education, the print media (the publishing of matrimonial advertisements seeking brides and grooms), monetization of relationships (the escalation in the practice of dowry), cultivation of distinction and cultural capital (debates around what constitutes a tasteful wedding), and law."[19] These changing ideas, especially the ones with regard to ideas of tasteful weddings, resulted in a growing usage of "modern" technologies such a photography and illumination.[20] Different forms of electric lighting also became agents that enmeshed an audience to endorse and rethink social economic and political norms. Illuminations with gas and oil lamps were central to rituals in which the sensory experience of bright gas lighting in the outer/public spaces and the mellow light of oil lamps in more private spaces made them a unified illumination system within the wedding scene. The introduction of battery-operated electric lighting shows how bright lighting could be introduced

in private spaces. In an exhibition on 27 January 188 in the Town Hall, Dey, Sil & Co., — who described themselves in advertisements as "electricians and engineers" — exhibited battery-operated lamps for carriages.[21] A week later, *The Statesman* reported that the same carriage, lit by Dey, Sil & Co.'s electrical system, was used as a nuptial car in the procession of an elite wedding in Pathuriaghattah.[22] Outside of processions, electric lighting's connections to the *bhadralok* elite also played into performances of extravagance in wedding rituals newly introduced in the late-nineteenth century, where wealthy families displayed the gifts they exchanged which, given how expensive electric supply and technologies were in the late-nineteenth and early twentieth centuries, also included electric lamps and fans.[23]

Weddings point to the performative dimension of electric lighting; they are not just routine events, but events charged with affects as rituals and displays of wealth are arranged through material electrical technologies like batteries, generators, wires and bulbs. But as the social base of electrical use broadened through the late-nineteenth and early twentieth centuries, the arrival of electrical technologies in public and domestic spheres became central to discussions of the ideological and material boundaries between the "home" and the "outside". The rise of a distinctly nationalist aesthetic of family life in colonial Calcutta established a set of domestic ideals that had important implications for the ways in which the material world connected with the cultural. Sections of Bengal nationalists focused on creating their own sovereign domain in the Bengali household before their political battle with imperialism in the outside world. This was achieved by separating what was termed by nationalists the spiritual domain of the Bengali domestic sphere from the material influences of the outside world. Under the combined influences and pressures of Bengali nationalism and Western colonialism, the Bengali middle-class intelligentsia actively engaged in refashioning the family and the domestic sphere as new sites of cultural ideal and national regeneration.[24] The installation and use of electric supply and technologies in the home, however, required a reconciliation between the dichotomy of the political and material outside, and the spiritual and cultural inside. In her study of the colonial and anti-colonial "production" of varied representations of colonial and post-colonial Calcutta, Swati Chattopadhyay posits the idea of examining the idea of "home" within ideological imaginations of the public sphere. "The dyads of inside-outside, spiritual-material, female-male themselves," she argues, "have to be pried open."[25]

Reconciling with Change: Electricity in the Home and the Outside

The third scene of the first act of Amritalal Basu's *The Babu: A Bengali Society Farce* — performed from 1894 to the early 1900s at the Star Theatre in Calcutta and

translated to English in 1911 — opens in the common room of the socio-religious reformist organization, the Brahmo Samaj. The audience finds itself in the middle of a heated argument between the Brahmo reformer, Sajanikānta (translation: dear friend), and Aśaniprakāś (translation: lightning bolt; introduced in the list of characters as a "'scientific' *bhadralok*").[26] Aśaniprakāś is shown criticizing both Hindu religious beliefs and the Brahmo Samaj's arguments for religious reforms. While critical of the Hindu ritual of creating idols and "calling them likenesses of God," he also rejects the Samaj's claims that God was without form. He tells Sajanikānta that God had to have form, "otherwise is science false — 'and that's impossible.' You know that even the air has some form."[27] He follows with a short lecture on the improvements that might enable men to spy God one day. "But," he reflects, "I am not sure whether this would mean anything except the glorification of science."[28]

There are several allusions here that need unpacking. The author and dramatist, Amritalal Basu (1852–1929) uses the characters to represent two factions of contemporary *bhadralok* society that, from the late-1860s onwards, constantly and publicly disagreed with each other's philosophies. Sajanikānta is a member of the Brahmo Samaj, a group that through a re-reading of Hindu Vedic texts (the Vedas and Upanishads) and influenced by the ideas and rationalism of the European Enlightenment, sought to reform Hindu religious principles and practices.[29] Aśaniprakāś, on the other hand, is a caricature of "scientific" *bhadralok* nationalists such as Mahendralal Sircar, whose brand of nationalism, as we have discussed in the previous section, was based on the cultivation of Western scientific thinking. Aśaniprakāś and Sajanikānta's discussions about the nature of science and God in the scene, in many ways, mirrored some of the public debates between the Brahmo Samaj and "scientific" nationalists through the late-nineteenth century.[30]

Arguing against the Brahmo Samaj's stance of delivering India through socio-religious reforms, and against the political endeavors of other nationalists, Aśaniprakāś suggests a shift away from indirect reformist and political actions towards a more direct scientific action against British rule. "Near Kalāgechia," he says, "an electric wire should be run into the Ganges capable of sinking all English ships as soon as they come within its range."[31] If the assertions of electricity's capabilities to deliver India through sinking English ships were not convincing enough, he adds that he could achieve much more than the Brahmo Samaj had ever been able to just through the power of science and, most importantly, electricity. He believes that he could go much beyond the Brahmo Samaj's simple attempts at abolishing the caste system or remarrying widows:

> Cannot you see that the marvels affected by electricity are increasing every day? We have telephones now; phonographs; by electricity steamers are propelled and trams made to run. Mark my words; if I live — and I'm bound to as I eat a quantity of electricity twice a day — I will by the force of electricity abolish the caste system, effect the remarriage of widows, teach women to ride horses, establish a Parliament in India, and do many other deeds besides.[32]

While there is virtually no technical detail in the story, Aśaniprakāś's utmost belief in the abilities of electricity to bring about social and political reforms echoes the beliefs of "scientific" Bengali nationalists inextricably interweaved electricity with progressive visions of European social and civilizational modernity. For instance, in defining Aśaniprakāś's character and dialogues, Basu borrowed heavily from public lectures like those of the historian, archaeologist and linguist Rajendralal Mitra (1822—1891). In a lecture at the meeting of the Family Literary Club on 20 May 1876, Mitra pointed to the potential, scope and purposes of harnessing the mystical yet pervasive natural phenomenon of electricity:

> **Electricity was the grandest, the most awe-inspiring, and all-pervading power in nature.** As it is manifested in thunder and lightning, we cannot behold it except in fear and trembling. Seen in the magnetic needle, it is curious and puzzling. Spread over the face of the universe, it is mysterious and inscrutable. **What has European civilisation of modern days done with it?** Why, it has forced that form of electricity called the magnetic to serve as our most trusted guide in the trackless ocean. It has obliged that subtle fluid to become the most rapid carrier of messages, girdling the earth as our carriers. It has converted it into the burnisher of our domestic vessels, coating our pots and pans, cups and saucers, with gold or silver, according to our wishes it has employed the magnetic current to ring our call-bells, and forge our platinum vessels, to give us light at our command, and to blow up obstructions in the beds of rivers and seas. Instead of cowing under the dread of the awful lightening, we can now make it come down at our beck, and oblige it to follow any course we choose, so that what was an irresistible evil has now become a faithful and obedient servant.[33] [emphases mine]

The location and contents of the lecture are important on many levels. Evidently, Mitra was speaking at the Family Literary Club, an organization established in 1857 by scientific-minded Bengali elite including Mitra himself.[34] Established and operated through complex networks of Bengali and Anglo-Indian patronage and personal liaisons, the Club was a means for the Bengali elite to fashion trust and civility based

on an intellectual orientation with mainstream preoccupations of nineteenth-century science.[35] Placed within this setting, Mitra's lecture on electricity meant more than a mere account of industrial and mechanical development. The transformative power of electricity to, as Mitra put it, "become the most rapid carrier of messages," " to ring our call-bells," and "toggle us light at our command" inextricably interweaved electricity with the everyday functioning of a progressive and "modern" civilization. The imagery of electricity packed with terms like "fear" and "mysterious", and described as a powerful and frightening "evil" that had been essentially "forced", "obliged", "converted" and "employed" into and as a "faithful and obedient servant" in measuring instruments, machinery, techniques and quotidian living signified a triumph of "European civilisation of modern days" over nature through human consciousness and action.[36] The rhetoric of the human mastery of nature reflected those regularly invoked by British scientists, engineers and thinkers in triumphalist narratives of the domination of colonized "natives" who viewed nature in mythical and superstitious terms. This idea of the conquering and domestication of nature in the colonies with science and machinery as an imposition of imperial rule is echoed in several post-colonial histories of science and technologies concerning the Indian subcontinent.[37]

The image of the "scientific" *bhadralok* in *The Babu* engaged with real-world referents that were simultaneously social, cultural and conceptual. The metaphorical use of electricity worked in two ways. First, electricity is presented as a symbol of Western ideas of education, material culture and civilisation. Secondly, with the sometimes unlikely or impossible capabilities of electricity in introducing societal and political change, the author presents the "scientific" *bhadralok* as one completely under the influence of ideas of scientific and technological modernity. In *The Colonial Staged: Theatre in Colonial Calcutta* (2007), Sudipto Chatterjee has shown how theatre in nineteenth-century Calcutta, not just the physical spaces, but also its actors, plays and language, was closely linked to contemporary issues of Bengali identity and politics. "The theatre of the Bengali intelligentsia," Chatterjee writes, "was a performance of the desires and ambitions of the class itself, necessarily a dramatization of the very issues and concerns that touched and then represented its socio-cultural and political life."[38] The humor and irony in Basu's *The Babu* highlighted his anxieties over the fractures in Bengali community, and the changing ideas of family and social life within shifts in urban, political and cultural settings. Swati Chattopadhyay has demonstrated that, in the nineteenth century, "the notion of community was undergoing some important shifts from the scale of the locality to the scale of the city and the nation, shifts which the likes of Amritalal Basu could not reconcile themselves."[39]

While electricity provided comic potential in critiques of the ideas of "scientific" nationalists, literary engagements with electricity also furthered serious associations in which electricity was seen as a hegemonic agent of colonialism. In the final act of *The Babu*, Nirada, the wife of an Anglicised *babu*, informs her friends of her husband's request for her to join him for a walk in the Maidan. Nirada's friends warn that her husband's request was highly inappropriate, especially as they believed leaving the domestic sphere was an affront to a Bengali woman's religion and modesty. Nirada, however, decides to venture into the outside world irrespective of her friends' warnings:

> But I have never been out walking and I am rather afraid. Still there will be others there too and I will remain quite close to him. ... What fun it will be! I will hear the band play. I'll see the electric light.[40]

As Nirada prepares to step into the outside world, the author implies the differences between domestic and public spaces and spheres. Written from a patriarchal viewpoint, the domestic sphere is implied as a safe space for Nirada and, in essence, the Bengali woman. Such characterization of the domestic sphere, as historians have shown, was common within Bengali middle-class nationalism in the late-nineteenth and early twentieth centuries. The refashioning of the Bengali domestic sphere was, Partha Chatterjee argues, centered around socially prescribing roles for men and women. The Bengali housewife — expected to combine the virtues of the self-sacrificing Hindu wife and mother, and the educated Victorian lady — was assigned as the guardian of the moral universe surrounding the home and the family.[41] However, as feminist historians such as Tank Sarkar have further added to this historiography, the re-articulation of the Bengali woman to develop a nationalist ideology also meant that women's rights and freedoms within the domestic sphere remained limited.[42] Dipesh Chakrabarty's analysis of the term "freedom" in the nationalist construction of the Bengali woman's identity suggests that while freedom in the West was defined in terms of rights to self-definition and self-indulgence, freedom for Bengali women was, however, defined as their capacity to voluntarily obey and follow norms set out for them.[43]

The attraction of electric lights in the *Maidan* also serves a specific purpose in the play's narrative. The *Maidan* is a vast open space surrounded on north, east and south sides by buildings and spaces belonging to governmental and colonial institutions, and bordered by the river on the west. As Sarmistha De and Bidisha Chakraborty describe in their historical study of the *Maidan*: "In Calcutta nothing symbolizes urban growth and planning under British rule more than the *Maidan* and its surrounding areas — it may be said that the city grew around this open space."[44] In addition to being a symbol

of colonial rule in Calcutta, the *Maidan* was also a space for scientific and technological demonstrations, including the public testing and exhibition of electric street lighting from the 1890s onwards.[45]

Nirada's eventual walk with her husband is, however, interrupted by molestations from a drunk English sailor. Her husband tries but fails to stop the assailant or protect his wife. *The Babu*, in its final act, depicts the outside world as an unknown and fearful space; something that Nirada was unaware of simply because she felt her husband's presence would make it safe for her to step into. In articulating the evils that existed under the lights of electric lamps, the author portrays the electric light as an element of what contemporary Bengali nationalists believed to be the colonized outside world dangerous to, and capable of overpowering the symbol of the Bengali spiritual and cultural domain — the Bengali woman and housewife. Also, in showing the Bengali man as being unable to protect the Bengali woman, *The Babu* also comments on Bengali nationalist patriarchy as having no rights or powers in the colonized outside world, and as having surrendered his control and masculinity to colonial rule. Both Tanika Sarkar and Mrinalini Sinha have shown in their respective works that the limited freedoms granted to the Bengali woman were a result of the Bengali man's limited rights in the colonial public sphere. Having surrendered control of the public sphere to colonialism and the West, the Bengali man now constructed ideal visions of domesticity by burdening the woman to become the protector and definition of Indian cultural values.[46]

Representations of electricity as an element of the colonized outside world were also later used in early twentieth century imagery produced by violent revolutionaries in their calls for armed revolt against the colonial government (**Figure 3**).

This undated and untitled set of images is surmised by the archivists at the Centre for Studies in Social Sciences to be from around the time of violent protests against the partition of Bengal in the first decade of the twentieth century. The images also seem to be missing any accompanying texts. What is important, however, is the image on the bottom right, which shows what looks like a general with his troops guarding the building and electrical pylon behind them. The text reads: "No matter how strongly guarded the seat is, the day has come for the masses." The palatial building in the background and the mention of "the seat" in the text hints at the building being an important seat of colonial power, most likely the Government House in Calcutta. The police in the foreground is the second aspect in the representation of colonial control. Finally, the pylon in the background shows electricity as what Daniel Headrick would term as a "tool of empire."[47]

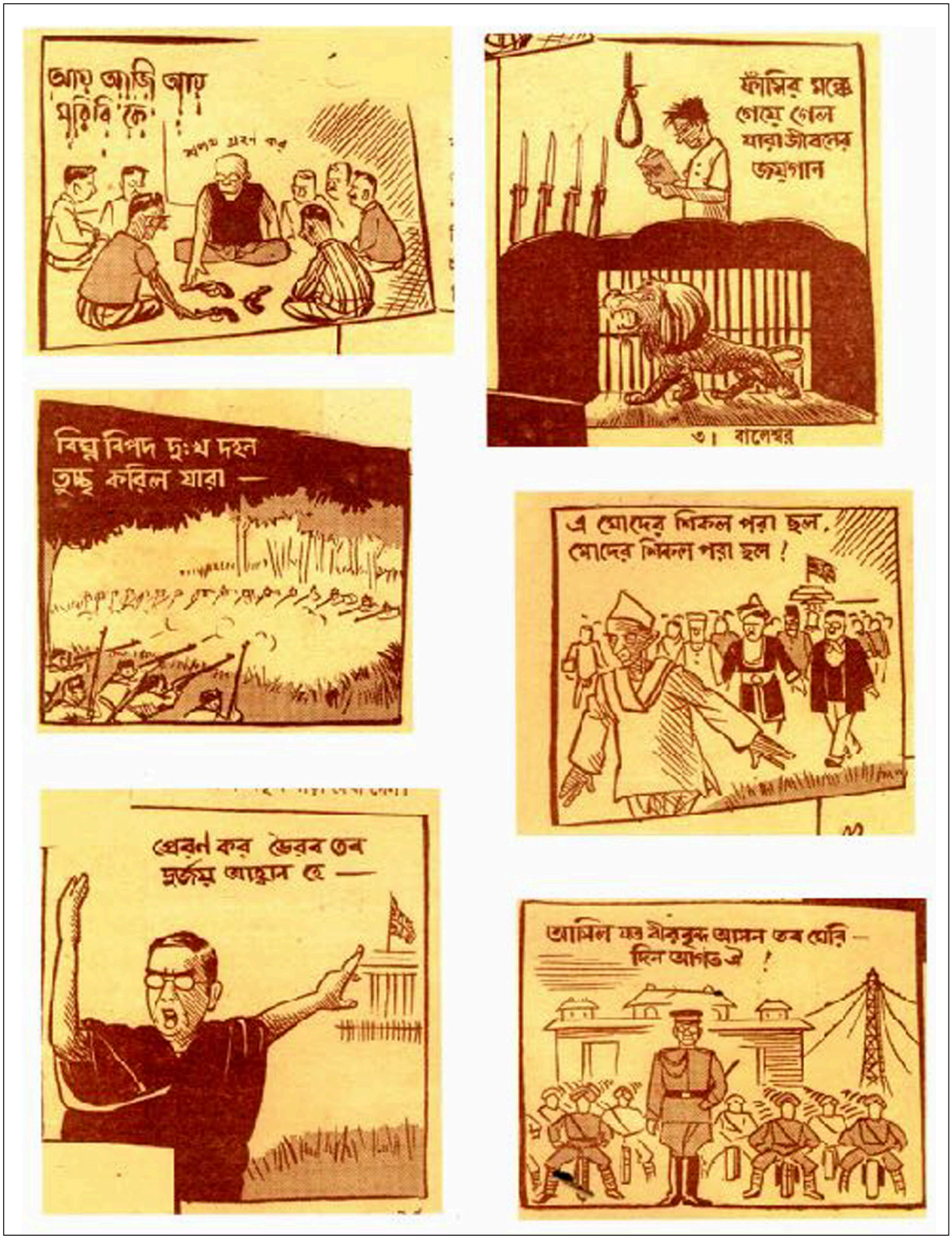


Figure 3: Untitled and undated.
Source: Centre for Studies in Social Sciences Calcutta Archives, Image: DU_0065.

Education, Tastes and Demands: Electricity and Gender Roles in the Home

In September 1914, a coroner and jury visited a house in Maniktollah Street in Calcutta to investigate the suicide of a 17-year-old Bengali woman, Hemanta Kumari Dasi. She was alleged to have hung herself from the electric fan in her room after her mother refused to buy her gold jewelry for the annual festival.[48] In Hemanta's bedroom, the electric fan hung from the ceiling both as an accomplice and a witness to her suicide. The electric fan in her bedroom is also a reminder of the affluence that Hemanta lived and died in. Electric lighting and fans in bedrooms and private spaces of the home, given the high costs to install and use them, were a rarity, at least in the first three decades of the twentieth century. These technologies, when first introduced, only moved into the drawing rooms of elite and middle-class spaces where they enmeshed with and enhanced the interior decor, often alongside other technologies like the radio and phonograph.[49]

In social commentaries in colonial Calcutta, there was a long tradition of men belittling women's demands for material goods as irrational, emotional and, above all, a danger to patriarchal hegemony in the domestic sphere. Written in 1900, in a period when electric supply and lighting were increasingly being introduced and used in elite social spaces, Amarendranath Datta's *Majā: A Social Farce* tells several stories about different aspects of life in Calcutta, including a criticism of the "modern" Westernized lifestyles of the educated Bengali elite and middle classes.[50] In one of the scenes the audience is introduced to an educated *babu* "Mister" Dhurandhar Pakrashi who, despite his Western-style education, is constantly ill-treated by his equally-educated wife and daughter. His daughter, Phulkumari, on returning from a game of tennis (a game usually associated with the British and Bengali elite), makes several expensive demands:

> Yes, now I want to go to the races. And you have to get me a new bicycle. I won't ride the one you gave me last year. … And please fix an electric lamp in my drawing-room; I can't see very well in the gaslight.[51]

On being mocked by her father for her expensive demands, Phulkumari quips: "You can't give me an education and then expect me to have low tastes?"[52]

This scene is significant for a number of reasons, not in the least as it offers a critical apparatus for understanding contemporary relationships between modern education, Bengali women, reformist and orthodox Hindu ideas about the place of the woman in the middle-class domestic sphere, and a rethinking of quotidian spending and consumption as part of class identity. It demonstrates how essential the Bengali

woman was to debates over colonial modernity and indigenous domestic life. These debates, historians have shown, resulted from colonial criticism of the social conditions of Bengali women at the beginning of the nineteenth century. Bengali middle-class men internalized these criticisms and, in order to compensate for their loss of power and authority in the public sphere under colonial rule, formulated their own reforms. Combining European ideas on domestic life with traditional social rules, nationalist reformers sought to transform the Bengali woman into a "new" woman who was expected to combine the virtues of the self-sacrificing Hindu wife and mother with the etiquettes and education of the Victorian lady. Education was meant to give Bengali women the ability to maintain order and cleanliness within the domestic sphere while using the practical aspects of their literacy to run their households according to the ever-changing economic and physical situations of the colonial world. The "new" woman was, however, in its very definition, subjected to what Partha Chatterjee and Judith E. Walsh have, in their respective studies, termed a "new patriarchy": "new" because it challenged orthodox patriarchal traditions by allowing women to be educated; while "patriarchy" maintained that women should, nevertheless, remain under their husband's authority.[53]

Women's education was, nevertheless, a highly contested undertaking, especially as it threatened orthodox Hindu ideas regarding the domestic role of Bengali women. Several different forms of literature — from essays to novels and satire — concerned themselves with the ill-effects of modern education on Bengali women and domestic life. In several letters to newspapers such as The Statesman, men often complained how reformers and their efforts to educate women resulted in the deterioration of the state of female society. For instance, on 14 December 1882, a certain Radhanath Chatterjee of Nohpara, Calcutta, compared older forms of education to the education that women received in contemporary female schools. He complained that while women's education used to be more practical and prepared women for domestic duties, modern education had created women who though it "beneath [their] dignity even to superintend the cleansing of domestic utensils [by male and maid servants], the zenana [women's quarters] department, the work of the kitchen, the feed of children and of the grown male members of the family, the proper arrangement of the bedroom, and the suckling and clothing of infants!"[54] "Modern" women, according to such complaints, devoted more time to reading novels and "personal cleanliness and decorations" than to household duties and raising their children.[55] "These are the immediate results of the so-called education of the present day," wrote another complainant from Calcutta on 21 March 1888.[56] Such "enlightened females", the complainant claimed, lacked "purity of mind, sincerity of character, holy habits, and above all love of their husbands.", and

all other attributes that made the perfect Hindu woman according to the ideas and customs of the Hindu patriarchy.[57]

Such formulations also coincided with a middle-class rethinking of quotidian spending and a delineation between "necessity" and "luxury". As historians of consumption in South Asia have shown, while the increasing availability of, and access to material goods enabled conspicuous consumption as a marker of social standing, the uncertain financial situations of early twentieth- century India, required living within one's means and encouraging thrift. Prashant Kidambi, in his exploration of middle-class reevaluations of their practices of consumption shows that thrift, in these deliberations, did not mean "abstaining from consumption altogether; rather, it called for judicious discrimination in one's pattern of expenditure. Central to the cultivation of thrift [...] was the need to distinguish between 'necessities' and 'luxuries'."[58] "Mister" Pakrashi's humiliation by his wife and daughter in *Majā* was, therefore, not only a dramatic recipe to evoke laughter in the audience, but also a means for the author to highlight the lack of emotions in an educated, "modern" woman. The oblique reference to electric light in Phulkumari's list of demands to her father also intertwines the material and the moral; firstly, in the author's ridicule of the "modern" woman's fondness of useless luxuries and, secondly, in relating the introduction and use of electrical technologies to an upheaval in the social order of the Bengali domestic sphere.

Conclusion

From the perspective of today's brightly lit and electrically connected spaces and societies, where access to electricity is almost ubiquitous, the apprehensions of Bengali nationalists or the bureaucratic struggles of consumers such as Mr. Chatterjee (discussed in the Introduction) may now seem insignificant or even absurd. Looking through the gaps and limitations of personal and vernacular archives, this article has attempted to show the ways in which the imperialist, nationalist, commercial, intellectual, political, cultural and material were deeply intertwined. Within such plural interconnected landscapes, varied historical actors found themselves reconfiguring new understandings of their place within contemporary transitions in cultural perceptions, political ideologies, material culture and sources of energy. In doing so, nevertheless, they were also inscribing their own understandings, meanings and interpretations into electricity and electrical objects. Transitions from existing ways of living to the introduction of newer energy sources and technologies are, thus, always accompanied by assumptions, imaginations and scrutiny of their possible uses and futures.

Notes

[1] Advertisements for electric punkahs supplied by CESC, *The Statesman*, May 1899.

[2] Animesh Chatterjee, "Manual and Electrical Energies in the Visualisation of "Electrical Calcutta", c. 1890–1925", *Journal of Energy History/Revue d'Histoire de l'Énergie* [Online], n°8=(17 April 2023), consulted 5 February 2024, URL : energyhistory.eu/en/node/330.

[3] I borrow my definition of the colonial centre and "White Town" from Partho Datta's work on urban planning in Calcutta from 1800 to 1940. Partho Datta, *Planning the City: Urbanisation and Reform in Calcutta, c.1800–c.1940* (New Delhi: Tulika Books, 2012), 13.

[4] Catherine Hobbs, "The character of personal archives: Reflections on the value of records of individuals." *Archivaria* (2001): 126–135 (128).
Also see: Bhavani Raman, *Document Raj: Writing and Scribes in Early Colonial South India* (Chicago: The University of Chicago Press, 2012) and Matthew S. Hull, *Government of Paper: The Materiality of Bureaucracy in Urban Pakistan* (Berkeley: University of California Press, 2012).

[5] Ibid.

[6] Akhil Gupta, "An Anthropology of Electricity from the Global South", *Cultural Anthropology* 30, No.4 (2015): 555–568 (556–557).

[7] Tess Burton, "Painful memories: Chronic pain as a form of re-membering." *Memory Studies* 4, No. 1 (2011): 23–32.

[8] Gupta, "An Anthropology": 556–557; Also see: Leo Coleman, *A Moral Technology: Electrification as Political Ritual in New Delhi* (Ithaca and London: Cornell University Press, 2017).

[9] Taylor Stone, "The Medium of Modernity — Review of Electric Light: An Architectural History by Sandy Isenstadt" https://issues.org/the-medium-of-modernity/.
For "electrical modernism", see: Sandy Isenstadt, *Electric Light: An Architectural History* (Cambridge, MA: MIT Press, 2018), 9–13.
For histories of electricity in the context of colonial India that follow a modernist approach, see: Sunila Kale, *Electrifying India: Regional Political Economies of Development* (Stanford: Stanford University Press, 2014), and Suvobrata Sarkar, "*Domesticating electric power: Growth of industry, utilities and research in colonial Calcutta*", *The Indian Economic and Social History Review* 52, no. 3 (2015): 357–389; *Let there be Light: Engineering, Entrepreneurship and Electricity in Colonial Bengal, 1880–1945* (Kolkata: Cambridge University Press, 2020).

[10] Gupta, "An Anthropology": 556–557.

[11] Orvar Löfgren, "Emotional Baggage: Unpacking the Suitcase" in Jonas Frykman & Maja Povrzanović Frykman (eds.), *Sensitive Objects: Affect and Material Culture* (Lund, Sweden: Nordic Academic Press, 2016), 125–152.

[12] Projit Bihari Mukharji, *Doctoring Traditions: Ayurveda, Small Technologies, and Braided Sciences* (Chicago and London: The University of Chicago Press, 2016), 2 and 24.

[13] Stephen Ahern (ed.), *Affect Theory and Literary Critical Practice: A Feel For the Text* (Cham, Switzerland: Palgrave Macmillan, 2019); Jonas Frykman and Maja Povrzanović Frykman (eds.), *Sensitive Objects: Affect and Material Culture* (Lund, Sweden: Nordic Academic Press, 2016).

[14] Prafulla Chandra Ray, *Life and Experiences of a Bengali Chemist* (Calcutta: Chuckervertty, Chatterjee & Co. Ltd, 1932), 501.

[15] Douglas Haynes, Abigail McGowan, Tirthankar Roy and Haruka Yanagisawa, eds., *Towards a History of Consumption in South Asia* (New Delhi: Oxford University Press, 2010), 10.

[16] Michael Mann, *Wiring the Nation: Telecommunication, Newspaper-Reportage, and Nation Building in British India, 1850—1930* (New Delhi: Oxford University Press, 2017), 105–124.

[17] Reports from *The Statesman* 8 October 1877: electric light used to illuminate a play on Hindu mythology at the opening of the Emerald Theatre; 14 May 1883: electric lighting at the opening of the Great Eastern Hotel; 6 November 1883: the Eastern Electric Light Company announced an exhibition at the Zoological Gardens.

[18] Ranabir Ray Choudhury, *Calcutta: A Hundred Years Ago* (Calcutta: The Statesman Commercial Press, 1987), 96–97 and 154. Also: "Marriage in High Life", *Amrita Bazaar Patrika*, 14 March 1905, 7.

[19] Rochona Majumdar, *Marriage and Modernity: Family Values in Colonial Bengal* (Durham and London: Duke University Press, 2009), location 136 of 5741 on Kindle.

[20] ibid, location 2414 of 5741 on Kindle. Photography, however, as Majumdar shows, focused only on the conjugal pair rather than on wedding rituals and ceremonies. This explains why electric lighting is only mentioned in newspaper accounts rather than present in photographic primary sources.

[21] *The Statesman*, 29 January 1888.

[22] *The Statesman*, 5 February 1888.

[23] Majumdar, *Marriage and Modernity*, locations 917 and 925 of 5741 on Kindle.
For a discussion on the high prices of electric supply and technologies in late-nineteenth and early twentieth century Calcutta, see: Chatterjee, "Manual and Electrical Energies ".

[24] Partha Chatterjee, *The Nation and Its Fragments: Colonial and Postcolonial Histories* (Princeton: Princeton University Press, 1993), 3–14 and 116–134 .

[25] Swati Chattopadhyay, *Representing Calcutta: Modernity, Nationalism, and the Colonial Uncanny* (London and New York: Routledge, 2005), 19.

[26] Babu Amrita Lal Bose, *English Translation of 'The Babu' (A Bengali Society Farce), translated into English by Nibraran Chandra Chatterjee* (Calcutta: Sanyal & Co., 1911), vii.

[27] ibid, 21.
Note: the use of single quotations within quotes from the play highlights the use of English in the original Bengali dialogues.

[28] ibid, 21–22.

[29] David Kopf, *The Brahmo Samaj and the Shaping of the Modern Indian Mind* (New Delhi: Archives Publishers, 1988), 42–85 and 249–310.
Also see: R. C. Majumdar, ed., *British Paramountcy in India and Indian Renaissance, Volume- II* (Bombay: Bharatiya Vidya Bhavan, 1965).
Amiya P. Sen, *Hindu Revivalism in Bengal* (New Delhi: Oxford University Press, 1993).

[30] Some of these debates can be read in Mahendranath Gupta, *Śrīśrīrāmkrsna Kathāmrta, translated by Swami Nikhilananda* (Calcutta: New York: Ramakrishna-Vivekananda Center, 1942), 142–143.

[31] Basu, *The Babu*, 26.

[32] ibid, 26–27.

[33] *The Hindoo Patriot*, 22 May 1876.

[34] Arun Kumar Biswas, *Science in India* (Calcutta: Firma K.L. Mukhopadhyay, 1969).

[35] Gyan Prakash, *Another Reason: Science and the Imagination of Modern India* (Princeton: Princeton University Press, 1999), 55 and 70.

[36] In his study of Enlightenment historians and their attitudes towards nature, Nathaniel Wolloch has chronicled how Enlightenment thinkers equated human cultural civilisation to human ability to control and cultivate nature. See: Nathaniel Wolloch, *History and Nature in the Enlightenment* (Farnham: Ashgate, 2010).
As Graeme Gooday has shown in *Domesticating Electricity*, popular representations of electric technologies in late-nineteenth century Britain and America described them as forms of "tamed", "captured" or "trained" lightning. Graeme Gooday, *Domesticating Electricity: Technology, Uncertainty and Gender, 1880–1914* (Pickering & Chatto, 2008), 19–30.

[37] See, for instance, Matthew Henry Edney, *Mapping and Empire: The Geographical Construction of British India, 1765–1843* (Chicago and London: University of Chicago Press, 1997).
Pallavi V. Das, *Colonialism, Development, and the Environment: Railways and Deforestation in British India, 1860–1884* (New York: Palgrave Macmillan, 2015).

[38] Sudipto Chatterjee, *The Colonial Staged: Theatre in Colonial Calcutta* (Calcutta: Seagull Books, 2007), 11.

[39] Swati Chattopadhyay, *Representing Calcutta*, 110.

[40] Basu, *The Babu*, 85.

[41] Partha Chatterjee, *The Nation and Its Fragments*, 3–14 and 116–134.

[42] Tanika Sarkar, "The Hindu Wife and the Hindu Nation: Domesticity and Nationalism in Nineteenth Century Bengal", *Studies in History* 8 (1992): 213–235.

[43] Dipesh Chakrabarty, "The Difference – Deferral of (A) Colonial Modernity: Public Debates on Domesticity in British Bengal", *History Workshop Journal* 36 (1993): 1–34 (11–12).

[44] Sarmistha De and Bidisha Chakraborty, "Maidan: The Open Space in History", *Social Scientist* 38, No.1/2 (Jan-Feb 2010): 3–22 (3).

[45] *The Times* (London), 12 May 1900, 5.

Exhibitions of electric lighting in the *Maidan* were installed by Kilburn & Co, an organisation based in London that in 1898 was renamed Calcutta Electric Supply Corporation.

[46] Sarkar, "The Hindu Wife and the Hindu Nation": 213–235.
Also see: Mrinalini Sinha, "Giving Masculinity a History: Some Contributions from the Historiography of Colonial India", *Gender & History* 11, No.3 (November 1999): 445–460.

[47] Daniel R. Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (New York: Oxford University Press, 1981).

[48] *The Leader* (Allahabad), 24 September 1914, 5.

[49] Rosinka Chaudhuri, *Freedom and Beef Steaks: Colonial Calcutta Culture* (Hyderabad: Orient BlackSwan, 2015).

[50] *Majā* was well received by critics on its opening. A review in the *Indian Mirror* on 17 January 1900 wrote: "In connection with the representation of 'Maja' on the boards of the Classic Theatre, Babu Amarendra Nath Dutt is to be congratulated no less as author than as manager and player. For a production intended for the 'season' the highest praise that can be accorded to the piece is that it has a plot".

[51] Amarendranth Datta, *Majā* [translation by Partha Chatterjee in "The Nation and Its Women", in Partha Chatterjee, *The Nation and Its Fragments*, 122].

[52] Ibid.

[53] Partha Chatterjee, *The Nation and Its Fragments*, 127.
Judith E. Walsh, *Domesticity in Colonial India: What Women Learned when Men Gave Them Advice* (Maryland: Rowman & Littlefield, 2004), 3–4.

[54] "In Transition", *The Statesman*,16 December 1882.

[55] Ibid.

[56] "The Modern Woman", *The Statesman*, 24 March 1888.

[57] Ibid.

[58] Prashant Kidambi, "Consumption, Domesticity and the Idea of the 'Middle Class' in Late Colonial Bombay", in Sanjay Joshi, ed., *The Middle Class in Colonial India* (Delhi: Oxford University Press, 2011), 132–155 (145).
Also see: Haynes, McGowan et.al., eds., *Towards a History of Consumption*, 10.
Abigail McGowan, "Consuming Families: Negotiating women's shopping in early twentieth century Western India", in Haynes, McGowan et.al., *Towards a History of Consumption*, 155–184 (161).
Thomas Richards, *The Commodity Culture of Victorian England: Advertising and Spectacle, 1851–1914* (London: Verso, 1991).

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