



When steam saved time in kitchen: Cooking with Icmic Cooker in twentieth century Bengal

Ishani Choudhury¹

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Abstract

The Icmic Cooker, invented by Bengali doctor and educationist Indumadhab Mullick in 1910, appeared as a new revolutionary technology to the Bengali kitchens of the early twentieth century. It saved time and effort by cooking several preparations at the same time. Icmic Cooker was a portable steam cooker fuelled by coal; the compartment where the fuel was placed had a small door with vents. This Cooker contained a double-walled cylindrical metal unit where several dishes could be cooked in separate containers, placing one on the other. The present article is a long-awaited empirical and analytical research on Icmic Cooker and its popularity among Bengali consumers, and therefore, serves the purpose of filling an academic gap in the existing scholarship on cooking methods of twentieth century Bengal. The paper intends to investigate how Icmic Cooker got integrally connected with understanding the scientific discourse of nutrition in colonial Bengal. It explores how the Icmic Cooker was represented in early twentieth century Bengal's health guides, advice manuals, and cookbooks. The paper will further examine the extent to which this cooking device found its place in the school curriculum, especially in the Home Science syllabus of the post-Independence era. It also investigates how science was invoked in the marketing strategies devised to popularize the Icmic Cooker through printed advertisements in newspapers and periodicals.

Keywords Icmic Cooker · Indumadhab Mullick · Steam cooking · Nutrition · Bengal · Twentieth century

1 Introduction

The primary object of cooking was to make hard food soft and more digestible. But along with this, some flavour also develops which is a secondary object of cooking. Man became a cooking animal long after his evolution into manhood... It was when vegetable diet largely came in, more specially during the agricultural age, that cooking was necessary. Of course, it was long after man came to learn the use of fire. At first it consisted only in throwing the thing into fire. This is Roasting. Boiling came on much later... The other methods of cooking as Frying is essentially boiling in oil, instead of in water... Steaming is perhaps the most modern method as it is the most economic and the best

for digestion. Nothing is wasted in this method (Mullick, 1912, pp. 105–106)

The confidence entrusted upon the method of steaming¹ for the purpose of cooking was a predominant tone in the prescriptive narratives and lectures of Doctor Indumadhab Mullick, who was a Lecturer in Pathology and Bacteriology at the College of Surgeons and Physicians, Bengal. This significance accorded to steam-based cooking also worked as one key concept behind his invention of Icmic Cooker in (1910). Icmic Cooker appeared as a new revolutionary technology in the Bengali kitchens of the early twentieth century, which could save time and effort by cooking several preparations simultaneously. Icmic Cooker was a portable steam cooker (Fig. 1) that contained a double-walled cylindrical metal unit where more than one dish could be cooked

✉ Ishani Choudhury
ishanihistory@gmail.com

¹ Department of History, Bethune College, Kolkata, India

¹ I. M. Mullick “Art of Cooking”, *On Food and Cooking*. Calcutta: Indian Medical Record Office. 1912, pp. 105–106.

Fig. 1 Icmic Cooker as illustrated by Shobhona Ghosh in *Adhunik Griha Bigyan* (1958), p. 318



in separate containers, placing one on the other. The present essay traces the history of Icmic Cooker as it became familiar to Bengali households and became integrally connected with the understanding of the health and nutrition of colonial Bengal. The paper explores the ways in which Icmic Cooker and its benefits were represented in the health guides, advice manuals, and cookbooks of early twentieth century Bengal and the extent to which this cooking device found its place in the school curriculum, especially in the Home Science syllabus of the post-Independence era. Special attention is paid to the marketing strategies devised to popularize the Icmic Cooker through printed advertisements in the pages of the newspapers and periodicals invoking science.

A vital connection is perceived between using the Icmic Cooker and the concept of ‘saving time’ in early twentieth century Bengal. Clocks determine the time at a particular moment and the measurement of the length of the durations involved (Birth, 2012, p. 40). Sumit Sarkar, in his pioneering work on the clock time in the context of colonial India, argued that disciplinary time was a particularly abrupt and imposed innovation in colonial India (Sarkar, 1992, p. 1549). Following English historian E. P. Thompson’s work, Sarkar has put forward that Europe had gone through a slow and phased transition spanning for some five hundred years, ‘from the first 13-fourteenth century mechanical clocks with hour-hands alone through the later innovation of watches counting off minutes and seconds, down to the developed 18-nineteenth century apparatus of disciplinary times’. This time, discipline reached India with the coming of colonialism. In the first decades of the twentieth century, colonial India’s western educated urban middle class gradually had to get more acquainted with the “modern” clock-time based routine for education and employment. Time acquired new meaning and disciplinary authority through an “abrupt entry of clocks and watches” (Sarkar, 1997, p. 283). In this context of time discipline, Projit Bihari Mukharji believes that time discipline is a historically variable regime constituted through specific and historically contingent interactions between objects, agendas, and actors (Mukharji,

2017, p. 102). As argued by Mukharji, industrial capitalism’s strict temporal regime emerged differently in different historical contexts (Mukharji, 2017, p. 116). Mukharji has found mechanical watches in Calcutta to be highly desirable objects; the ‘desire was neither for utility nor practical comfort, but rather for perfection and beauty’ (Mukharji, 2017, p. 114).

The present paper finds that in early twentieth century Bengal, railways, government offices, schools, and colleges appeared as sites for implementing newer concepts of time and discipline. With the increasing significance of clock time in the lives of the Western educated Bengali middle class, the meal advices began to include fixed clock-time routines. Sripati Charan Sarkar a Sub-Assistant Surgeon in colonial Bengal (1914), wrote that each meal should have a fixed clock time-based schedule. Breakfast is at 6 a.m. in summer and 7 a.m. in winter. Noon was scheduled as the lunchtime, and the afternoon snack was to be consumed at 4 p.m. For better digestion, the dinner was to be completed within 8 p.m. (Sarkar, 1914, pp. 30–31). Kaviraj Indubhusan Sen allotted the time between 9 a.m. to 11 a.m. for the first major meal of the day.² For meal consumption, he provided both the traditional Ayurvedic dictum based on the significance of fixed ‘*prohor*’ (a measure of time equal to three hours) and the ‘modern’ clock-time based routine, with which the urban educated middle class gradually had to get more acquainted for the sake of education and employment (Sen, 1928, p.73). Thus, in the first few decades of the twentieth century, the Bengali middle-class idea of an appropriate meal had to reconstitute itself in terms of routine and schedule as per the growing involvement of the educated middle class in education and employment. The tension there was to balance the rush to reach the office or school-colleges on time and the necessity to have a ‘healthy’ ‘nutritious’ meal in an appropriate time. With the new kind of work culture and clock time, food preparation often could not expect constant involvement and supervision on the part of the person involved in the food preparation. Rather, there was a need to make the entire cooking process easy and comfortable. Mullick’s Icmic Cooking appeared with an expectation of preparing ‘nutritious’ meal that too with a promise of ‘saving time’ in the new regime of the clock-time in early twentieth century Bengal.

2 Purpose of writing: historiographical intervention

The historical reference to Icmic Cooker has found academic expression in the research works of scholars like Projit Bihari Mukharji and Utsa Ray. Mukharji, in his research on

² Kaviraj Indubhusan Sen, *Bangali r Khadya*, p. 73.



the history of the *daktari* medicine in colonial India (particularly from the 1860s to the 1930s) through the lives and writings of numerous Bengali *daktars*, has mentioned Mullik's Icmic Cooker as “a rice-cooker with a timer which was supposed to have cooked rice—the staple Bengali diet-healthier” (Mukharji, 2009, p. 58). This Cooker has been marked as a “huge commercial success” (Mukharji, 2009, p. 58). Mukharji's study also becomes extremely pertinent to the present research on Icmic Cooker as it highlights the rising importance of vitamins in the Western knowledge of nutritional science, vitamins (*bhaitameens*) were largely presented as a panacea for a range of ills since the late 1920s and 1930s and held as capable of working through the body's defence, thereby making the body ready to fight contagions (Mukharji, 2009, p. 124). The present essay addresses the question of success and popularity of Icmic Cooker in historical perspective, especially investigating the increasing importance accorded to steam cooking in colonial India in the first decades of twentieth century.

Ray's work *Culinary Culture in Colonial India* (2015) understands the formation of the colonial middle class through the prism of cuisine and elaborates how the middle class in colonial Bengal indigenized new culinary experiences that they experienced as a result of colonial modernity. Ray defines Icmic as a ‘special type of cooker in which rice, pulses, and vegetables could all be cooked together and fast’ (Ray, 2015, p. 115). Cookbooks of colonial Bengal also started devising recipes emphasizing the use of Icmic Cooker, which the present article teases out. As India won freedom from colonial rule in 1947, the Indian technological achievements were highlighted with great sincerity. The curriculum of school subjects like Home Science began to include special notes on cooking with the Icmic Cooker, aiming to tutor the young girls in handling new culinary devices. Thus, the present study, by taking the case of Icmic Cooker in its own right, addresses many such areas that have remained untouched and unexplored.

While finding out the historiographical location of the argument of the present paper, it is essential to engage with the existing historical scholarship on nutrition. In Oxford very short introduction to ‘Nutrition’ it is mentioned that human beings have evolved ‘an elaborate system of physiological mechanisms to ensure that the body's needs for metabolic fuels and nutrients are met and to balance food intake with energy expenditure (Bender, 2014, p. 5). David Arnold's work is very insightful and extremely relevant in the historical analysis of colonial India's ‘nutrition science’. Arnold has clearly explored how the study of diet and nutrition emerged in India. Arnold argued that in the early nineteenth century, food and diet formed a part of a colonial acquisition of knowledge about and presumably power over India, part of colonial reconnaissance and categorization of India, its people, and resources (Arnold,

1994, p. 4). He further elaborated that in colonial India, famines and jails provided important contexts and observational arenas for a significant widening of nutritional knowledge and debate between 1860 and 1914. In the 1920s, and more especially in the 1930s, population growth became a major issue, and the discussion of diet and malnutrition was of central importance (Arnold, 1994, p. 17). As stated by Arnold, in India in 1920s and 1930s, there were considerable developments in the domain of nutrition science such as ‘the emergence of the nutritional research centres and specialists’.³

Michael Worboys also provides a crucial argument regarding the discovery of colonial malnutrition in the period between the two World Wars (Worboys, 1988). Though Worboys does not entirely focus on colonial India, his work is still an important contribution to the history of nutrition and dietetics in India. The present paper draws upon Rachel Berger's work, which understands in the context of colonial north India the meaning of a variety of food-related advertisements and argues that food advertising was made readable and relevant by identifying food “as a protector of health and wellness” of the family and of the nation (Berger, 2013, p. 22).

A significant goal of the present study is to highlight how the Bengali middle class perceived Icmic Cooker in the context of the traditional practice of cooking rice. David Arnold has investigated in detail how rice became a Western imperialist symbol for negative racial stereotypes about Asian societies. In the words of Arnold, “rice was seen to be a ‘bad’ food in as much as it was understood to be less nutritious, less energy-giving, less vitalising than European cereals such as wheat and so contributed to be the moral weakness as well as physical inferiority of many Indians for whom it constituted the principal diet” (Arnold, 2019, p. 112). Arnold's historical analysis further examines how colonial writers identified the connection between rice consumption and the nutrition deficiency disease—Beriberi.

From a scientific perspective, scholars in the past few decades have increasingly underlined the connection between rice, vitamin B, and Beriberi disease and food chemical analysis of food (Carpenter, 2000; Ventura, 2019). The integral connection of rice with existence, identity, and modernization has also attracted scholarly attention in recent years (Marton, 2014, p. 108; Ohnuki-Tierney, 2004,

³ As put forward by David Arnold, the study of diet and nutrition was an important branch of the West's scientific imperialism, but it was more than just an imperial monologue. It rapidly became a “contested cultural and political field, especially in the debates about poverty and development in the India of the 1920s and 1930s”. By the mid-1940s nutritional science was becoming part of a programme for India's Post-War reconstruction and reform. By 1947 nutrition had come to occupy a prominent place in expectations of the new nation state (Arnold 1994, p. 26).



pp. 4–9). Hiromi Mizuno has highlighted the story of agricultural modernization in Asia by using the genealogy of the hybrid rice Mahsuri developed in Malaysia by Japanese agronomists in the 1960s. Mizuno discusses how securing a stable rice supply for the rapidly increasing population in industrial Japan was not only an economic process but became a political agenda also (Mizuno, 2020, p. 361). Francesca Bray argues that both Japan and Malaysia attribute high moral value to rice ‘as national staple’, ‘generator of national wealth and solidarity’, and ‘definer of national identity’ (Bray, 2019, p. 23). Bray’s research explains how Japanese rice had been woven into “theories of Japanese-ness” (*nihonjinron*) and how Japan has appeared as a classic case of “rice as self”, a country where “self-identification as rice-producer and rice consumer has a particularly venerated and richly elaborated history” (Bray, 2019, p. 27).

3 Icmic Cooker and the importance of steam cooking

Steam cooking, which has been recognized as an ‘efficient method of cooking food in steam’, generated from boiling water in a container, was an ancient method of preparing the meal and gradually gained worldwide importance with time. The earliest Indian steamer was “a perforated clay cylinder” used in the Indus Valley Civilization (Snodgrass, 2004, p. 946). Steaming has been regarded as one of the fastest methods for pouring heat into food, owing to the large amount of energy that “water vapor releases as it condenses into droplets on the food surface” (McGee, 1984, p. 164). Steaming as a cooking method mainly relies on water vapour to transfer heat. Young et al. in a paper entitled “Status and prospects of nutritional cooking” (2019) published in the journal *Food Quality and Safety* states, “water vapour has high pressure and can strongly penetrate food; so, the food is easy to be cooked, and its properties change rapidly which can completely preserve the integrity of the food and reduce the loss of nutrients in the food.” (Yong et al., 2019, p. 138). In the late nineteenth century, the text *Science in the Kitchen* (1893) composed by Kellogg marked steaming as “a most economical and satisfactory method of cooking” especially in case of fruits, grains, and vegetables. Kellogg’s ‘scientific treatise’ provided the readers with an illustration and description of the steam cooker in the section on ‘Kitchen Conveniences’, where it is mentioned that the “steam-cooker has an escape-steam tube through which all excess of steam and odors passes into the fire, and thus its different compartments may contain and cook an entire dinner, if need be, and over one stove hole or one burner of an oil or gasoline stove” (Kellogg, 1893, p.50) (Fig. 2).

James Knight (1895), a Lecturer in Physiology and Hygiene at High School of Glasgow, wrote in the preface of



Fig. 2 Illustration of Steam Cooker as found in *Science in the Kitchen* (1893)

his book, *Food and its functions: A text-book for students of cookery*,

All vegetables, however, even rice, contain salts and other soluble matters for which they are valued, and for the sake of which indeed green vegetables are taken at all, and to boil vegetables of this class would be to throw away the most useful part of their substance. Unless the water in which they are boiled is to be used as stock for soup, all such articles are best cooked by Steaming, and this process has the further advantage of preserving the shape of the dish, vegetable or fish, thus admitting of its being sent up to the table in a more tempting guise. The heating agent here is vapour, and if the process be carried on in a closed vessel, vapour at high pressure and therefore more penetrating. Steaming is specially suited for rice, which has so few salts that it cannot afford to lose any, and for potatoes, which, apart from their starch, are valued for their potash compounds.

Cookers and steamers for culinary purposes were being invented since the late nineteenth century in different parts of the world for steam cooking, which can be evidenced from the brochure of Fisher’s Steam Cooker (patented 1884) published by Clinton New Era Print and the printed manual of Peerless Steam Cooker (1916) of Buffalo, New York.⁴ The testimonials attached to Fisher’s Steam Cooker’s booklet certified the Cooker for saving time, work, and fuel. It claimed it could improve the flavour of all food cooked. The Peerless Steam Cooker Manual provided the consumers with directions for using the Cooker along with several special recipes that could be prepared in that steam cooker (Figs. 3 and 4).

⁴ See Brochure, Fisher’s Steam Cooker, Clinton, 1884 and Manual, Peerless Steam Cooker, Buffalo, 1916.





Fig. 3 Fisher's Steam Cooker, Clinton, 1884



Fig. 4 The Peerless Steam Cooker, Buffalo, 1916

Mary C. Moxon, a Lecturer in Home Economics at Manitoba Agricultural College, Canada, her article “What to Expect from Cookers” published in *The Grain Growers' Guide* argued that a steam cooker could save time and labour for the cook, since the food in steam cooker needed not to be “watched, basted, turned or stirred” (Moxon, 1926, p. 6). Mary further elaborated that “there was no other method of cookery by which tough cuts of meat, fowl etc. may be made so appetizing

and tender”. Fruit cake or plum pudding were also found as “exceptionally good steamed” in this way without any “danger of burning or drying them out” (Fig. 5). A steam cooker has always been recommended as a better option for fuel consumption or cost.

In the context of colonial India, especially in the first few decades of the twentieth century, steam cooking became a crucial point of attention with the increasing concern about ‘health’, ‘nutrition’, and ‘well-being’. G.V. Krishnacharya, a scholar well-versed in Sanskrit and Kannada, published *Science of Steam Cooking (Havyapākapaddhati)* in Kannada language in 1911. Having suffered for a long time from stomach troubles such as indigestion, dyspepsia, and resulting debility, he became convinced that a change was necessary in the method of cooking.⁵ The objective of the treatise was to help others “to build up healthy bodies, to prevent waste of energy in sickness, to minimize expenditure of time in cooking, and of money in the purchase of food stuffs”. In the words of Y. Srinivasa Rao, the retired engineer who had written the Foreword for the treatise, “... steam cooking saves both time and money to an extent not easily conceived by those who have not actually tried it”.⁶ Achyuta Rao, a Senior Surgeon, witnessed how Krishnacharya cooked several dishes by steaming at a single sitting and overlaying one plate or vessel over another within a single big vessel over an oven. Rao certified that the entire steam cooking process took only an hour, used 30% less fuel, and finally prepared excellent and thoroughly cooked dishes like Tuvar Daal, dry grams, and hard-grained vegetables.⁷ The men of science also emphasized the significance of steam cooking in early twentieth-century Bengal in the ambience of the rising importance of nutrition and dietetics. The Icmic Cooker, invented by Bengali Doctor Indumadhab Mullick in (1910), not only became compatible with the concepts of saving time, labour, fuel, and money through steam cooking, but also appeared as a great scientific invention in twentieth century Bengal which was providing an assurance of keeping the required nutrients intact through a ‘healthier’ method of cooking, absolutely essential in the nutritional science. Mullick’s Icmic Cooker became useful in his own time and also appeared as an inspiration for many such future steam cookers.

⁵ P. S. Achyuta Rao, Testimonials, in Krishnacharya, *Science of Steam Cooking*, Bangalore: Vokkaligara Sangha press, 1911 pp. IX–X.

⁶ Foreword, Y. Srinivasa Rao, in Krishnacharya, *Science of Steam Cooking*, V.

⁷ Rao, Testimonials, in Krishnacharya, *Science of Steam Cooking*, IX–X.



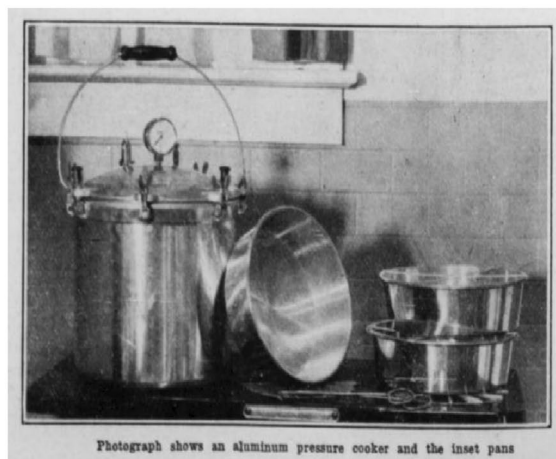


Fig. 5 Images from “What to Expect from Cookers”, The Grain Growers’ Guide, 15th July, 1926

4 Indumadhab Mullick’s Icmic Cooker

Born in 1869 at Guptipara, Bengal, Indumadhab Mullick was a physician, inventor, entrepreneur, lawyer, and educationist of colonial Bengal. He passed the LMS (Licentiate in Medicine and Surgery) Examination in 1898 and Doctor of Medicine (MD) in 1908. He was an MA in no less than 5 subjects.⁸ As mentioned in the *Journal of Asiatic Society* (1976), I.M Mullick took “his Honours in Arts (MA) in Mental and Moral Philosophy in 1891 as a private student, in Physics in 1892 from Bangabasi College, in Physiology and Zoology in 1899 as a private student”.⁹ He served Bangabasi College as a Lecturer, and helped the financially weaker section of student in their academic endeavours. He was enthusiastically engaged in treating critical patients in times of need. He was found helping the revolutionaries of British India. As Swadeshi Movement started as a response to the Partition of Bengal in 1905 announced by Lord Curzon, Indumadhab Mullick engaged himself in the endeavours of the National Education Movement. One can find the name of Indumadhab Mullick as Examiner of Practical Examination of Botany and as Paper Setter and Examiner of Written and Practical Examination of Physiology in National Education’s Public Examinations.¹⁰ The Annual Report of the National Council of Education (1908) also mentioned that some delicate surgical instruments of Dr Indumadhab

Mullick were repaired at that department to his utmost satisfaction.¹¹ Thacker’s Medical Directory of India, Burma and Ceylon (1915) listed among the “Medical Men” Indumadhab Mullick as a Lecturer on Pathology and Bacteriology at the College of Surgeons and Physicians, Bengal (Thacker’s Medical Directory, 1915, p. 521).¹²

Indumadhab Mullick’s MD Thesis (1907) dealt with “Diabetes”, which he marked as a disease “most widely prevalent in Lower Bengal” (Mullick, 1910, p. V). In the introductory chapter, he made it clear that Diabetes as a disease had interested him since 1899; he had found this disease extremely common in Calcutta among the patients he had to deal with and his friends and relatives (Mullick, 1910, p. 1). Mullick teased out various aspects of diabetes, including the diet that should be ideal for treating the disease. The role of meat, carbohydrate, milk was thoroughly analysed in the context of the disease. Mullick provided a long list of foods suitable for diabetes. In the words of Mullick, “by taking good care of the children in their growing period of life, we can prevent the development of diabetes, even in the offspring of people who have got hereditary tendency in the family” (Mullick, 1910, p. 23).

Mullick was also a prolific writer who authored many science-oriented papers and two interesting travel accounts, entitled *Bilat Bhromon* and *Chin Bhromon* (1906). Mullick’s *On Food and Cooking: A Collection of Lectures and Articles on the Subject* was published in 1912. Some of these were lectures delivered at the Calcutta Medical Club, Calcutta

⁸ *The National Magazine: A Monthly Review*, Vol. 29, pp. 1–10, May 1917, p. 267.

⁹ *Journal of Asiatic Society*, Calcutta, 1976, p. 23.

¹⁰ *The Dawn and Dawn Society’s Magazine*, Old Series, Vol XI, -1, (New series, Vol IV, -1), Calcutta, Sept 1907, p. 95.

¹¹ Annual Report of National Council of Education, Calcutta, 1908, p. 22.

¹² Thacker’s Medical Directory of India, Burma and Ceylon, 1915, p. 521.



University Institute, Young Men's Christian Association, Scottish Churches College, etc.; others were contributions to scientific and popular journals. Through this entire collection of papers, Mullick endeavoured to make the readers aware of the "ideal" meal for the students of Calcutta, components of a balanced diet, hygiene of student life, variety and use of the meat diet, "few golden rules of food and cooking", benefits of consuming milk and the art of cooking (Mullick, 1912, p. V). According to Mullick, one-fourth of the nourishment of the food is lost due to boiling, as a large portion of valuable salts and minerals are passed into the water, which is usually thrown away. Hence, in Mullick's opinion "steaming is the best".¹³ In the chapter entitled "Our food problem: A medical advice", Indumadhab clearly elaborated:

Our staple food is rice, which is very rich in starch, 95%, and the poorest in proteids or the muscle-building property, 5%. Besides, we use it very wastefully due to our unscientific method of handling it. The outermost coating contains the greatest amount of proteids, but in cleansing the grain, we rub them away... The method that should be used is to steam sunned rice without its cortex being brushed off by the wooden block used to clear rice from the husk. In this, all the nourishment is preserved- and at the same time, the outermost nourishing cortex, which is rather difficult to digest, is retained and made digestible by exposure to slow and continuous heat or better in steam cooking.¹⁴

This importance accorded to steaming has worked as one main principle behind the invention of Mullick's Icmic Cooker, which was made to retain food's nutrients, be it rice, lentils, or vegetables. It has been assumed that Mullick got the idea of Icmic Cooker from the kitchen of renowned Jagannatha Temple of Puri, where he observed how "*bhog*" (meal prepared for offering to Lord Jagannatha and then for feeding thousands of devotees) was cooked by placing 6 *handis* (the urn shaped pots used for cooking) one on top of the other. This information was confirmed by Indumadhab's grandson, Bengali actor Ranjit Mullick, who had heard in his childhood that the idea of Cooker came from the kitchen of Puri Jagannatha Temple. Temple kitchen provided Indumadhab with the concept of cooking several dishes together saving time, labour, and fuel and he gave his Cooker the name "Icmic", presumably taking "Ic" from "hygienic" and "Mic"

from "economic".¹⁵ Another version states that Indumadhab Mullick got the idea of Icmic Cooker from his visit to China where he might have observed such meal preparations using various bowls at the sidewalk.¹⁶ Mullick described in his travel account that the Chinese vendors cooked and kept the food warm in round baskets, heaped on top of the other and at the bottom there was a burning pot filled with charcoal (Sen, 2007, p. 466). The Icmic Cooker, which was invented by Indumadhab Mullick in (1910), contained a double-walled cylindrical metal unit into which water was poured. At the base of this portable tiffin carrier-like unit, there was a compartment where the charcoal was to be placed, and it had a small door with vents. The metal unit housed four round containers which were to be placed one over the other. It took just a few hours to cook an entire meal. The Report of the Indian Association for the Cultivation of Science (1918) presented that "rice is very conveniently and economically prepared in the Icmic Cooker devised by Dr Indumadhab Mullick".¹⁷

4.1 Advertisement of Icmic Cooker

Advertising strategies were increasingly devised to make Icmic Cooker a commercial success in the colonial market, and science was frequently invoked in those advertising strategies. In the last few decades of the nineteenth century, the growing colonial market faced several newer developments, with advertisements of various goods in the print media being the predominant ones. The newspapers, magazines, and periodicals were replete with advertisements of various kinds, especially since the turn of the twentieth century. It was a time when a growing range of new goods was flooding the colonial market, and the middle class was the target customers in the market as they constituted the class with an aspiration of higher living and a self-perception of defining themselves as culturally and intellectually superior from the others. The emergent confident air of advertising openly indicated how the educated middle class, contrary to its own moralizing, had started patronizing the market of consumer goods and how, through these advertisements, the colonial market had begun to address the middle-class households in a voice of unprecedented authority (Banerjee, 1997, pp. 95–96). The Icmic Cooker advertisements had the educated middle class in their target

¹³ Mullick, "Few Golden Rules of Food and Cooking", *On Food and Cooking*, 58.

¹⁴ Mullick, "Our Food Problem: A Medical Advice", *On Food and Cooking*, p.41.

¹⁵ "ICMIC cooker invented by Indumadhab Mallick taken ideas from Lord Jagannath", Rabibashariyo, Anandabazar Patrika, (12.th April, 2020), <https://www.anandabazar.com/rabibashoriyo/Icmic-cooker-invented-by-indumadhab-mallick-taken-ideas-from-lord-jagannath-1.1134909>.

¹⁶ <https://www.getbengal.com/details/indumadhab-mallick-revolutionized-the-kitchen-with-the-invention-of-Icmic-cooker>.

¹⁷ Report of Indian Association for the Cultivation of Science, Calcutta, 1918, p. 15.





Fig. 6 Advertisement in The Englishman dated 1st April, 1921 and 16th May, 1922

customer list and endeavoured to lure European families residing in India in the early twentieth century. *The Indian Review*, a monthly periodical in the year 1922, had one advertisement for the Icmic Cooker, patented by Dr I M Mullick, which claimed that over 80,000 of this “unique apparatus” were in use already.¹⁸ The advertisement for this Cooker frequently emphasized its ability to cook several dishes within a few hours without any supervision. Icmic Cooker’s advertisement received regular space in the English newspaper *The Englishman* in the 1920s, highlighted its skill to save money, fuel, and time, and simultaneously mentioned a “free descriptive catalogue” accessed through an application (Fig. 6).

An advertisement published in *Amrita Bazar Patrika* (one of the oldest newspapers of India) in 1936 tried to assure the consumers that if the food was cooked in the Cooker with alarm, the threat of the disease like Beriberi could be reduced. The text in the advertisement was:

Let not your family suffer from another attack of Beriberi. Insist on their Taking Rice, Dal, Meat, and vegetables cooked in Dr. I.M.Mullick’s (MA, Md., BL) patent Ic-mic cooker. It preserves the vitamin of the food.¹⁹

With the rising importance of nutritional science and dietary issues in the nationalist discourse of the 1920s and 1930s, the advertising strategy of the Icmic Cooker focused on the assurance of ‘preserving the vitamin of the food’ and save the families from the ‘attack of Beriberi’. As Sudeshna Banerjee has rightly observed in her

doctoral research that, from the 1920s, the educated sections deployed a new expression to signify their world; they now projected their families and household environment as ‘cultured’ (Banerjee, 1997, p. 226). It becomes evident from Icmic Cooker adverts that the advertisements of the 1920s and 1930s constantly attempted to entice the western-educated Bengali consumers by providing a message that their product would be in tune with the feeling of being ‘cultured,’ and at the same time, the product would be a ‘healthier choice’.

In the periodical *Baidya Hitoishi*, Icmic Cooker’s advertisement appeared as one of the most regular adverts (Mukharji, 2016, p. 65). With time, advertisements have become more visual in place of plain textual facts about the product. The print quality of the adverts was very poor, and even the pictorial texts were not very impressive (Ghosh, 2014, p. 12). However, it was quite fascinating to catch the market on the part of the advertisers and win the hearts of middle-class consumers through their stomachs. Undeniably, the number of food-related advertisements increased to a larger extent, especially in the 1940s during and after the Second World War. In the context of North India, Berger shows that in the 1920s, advertising consisted of a series of graphics-free, printed advertisements that occasionally appeared in the pages of newspapers and the back pages of popular books, whereas in the 1940s, advertising took up most of a page in local and national newspapers. In the case of Bengal of the 1940s, the increasing ratio of food adverts in a newspaper can be visualised from page seven of *Amrita Bazar Patrika* of 2nd March 1946, wherein a single page of five prominent advertisements (out of seven) was concerned with food and beverages: Ovaltine, Staffad’s Butter, Acme Biscuits,

¹⁸ *The Indian Review*, vol. 23, 1922, p. 26.

¹⁹ “Icmic Cooker”, Advertisement, *Amrita Bazar Patrika*, (September 6, 1936): p. 24.



Indian Tea Market Expansion Board and Lipton Tea.²⁰ The *Amrita Bazar Patrika*, in its Puja number of 1949 and 1950, had adverts for Icmic Cooker that contained a visual representation of the Cooker showing the entire unit along with its fuel chamber, and the inner containers were marked here for meat, dal, rice, and vegetable.²¹ The advertisement endeavoured to convince the consumers that the Cooker would be beneficial in defeating the food crisis. The ad's written content clearly declared, “all cooked in an hour automatically. ½ anna fuel for complete cooking” (Fig. 7).²² The ‘saving time’ argument was continuously invoked in the adverts of the cooker to ensure that consumers had a quick method of cooking. Customers were regularly warned about imitated cookers and asked to be conscious of the patented product of I. M. Mullick.

The visual presentation of the Icmic Cooker continued to appear in periodicals of 1950s and 1960s, especially in festive numbers as advertisers tried to draw attention of buyers by marking the Cooker as one “best gift of the festival” (Fig. 8).²³

4.2 Icmic Cooker in prescriptive literature of colonial Bengal

A number of periodical articles, health guides, household manuals, and cookbooks, inscribed by the spirit of nationalism, masculinity, and Hindu revivalism, were produced in colonial Bengal since the 1870s, which also became instrumental in teaching the “ideal” way of living to the Bengali middle-class readers. Cookbooks and medical advice manuals were composed by similar group of people with ‘similar political and commercial investments’ (Deb Roy, 2011, p. 182). There seemed to be “a pleasure element in advising others” (Laha, 1941, p. 46). Composed by men, these guidebooks and manuals sought to train women, especially wives of middle-class men, in the difficult task of running a household efficiently (Banerjee-Dube, 2016, p. 102). Educated Bengali men imagined themselves as duty-bound in their patriarchal society to educate women in their household duties because of the anxiety that women, if given a “modern” western education, might become negligent of their domestic responsibilities (Choudhury, 2017a, 2017b, p. 3). According to Judith Walsh Bengali middle-class men authored many texts with household advice for women to “reimagine and re-present the domestic world” (Walsh,

Fig. 7 Advertisement in *The Amrita Bazar Patrika*, Puja Number, 1949



Fig. 8 Advertisement, *Sharadiya Desh Patrika*, Puja Number, 1956

2004, p. 39). In order to do so, “Bengali manual authors had to enter both the physical and conceptual framework of the indigenous home” (Walsh, 2004, p. 39).

As reflected in these manuals, health and food became one of the principal contested sites in the colonialism/nationalism interface in the discursive realm. The colonial discourse had characterized the Bengalis as a “weak” race, whose weakness derived from their “unhealthy”, “innutritious,” and “enfeebling” meal. The British belittling of the Bengali middle class as effete and weak was answered by middle class’s attempts at making visible an alternative identity that could refute the charges (Choudhury, 1998, p. 6). In response to the colonial discourse of the Bengali meal, Bengali middle-class authors tried to project that the Bengalis were capable of cultivating an “ideal” meal independently and before the colonial presence. Through the projection, the concerned social group negated the ascription of inferiority or, for that matter, inverted the ascription and asserted the superiority of their food over an essentialized Western diet (Choudhury, 2017a, 2017b, p. 95). These prescriptions of a healthy diet became integrally connected with a glorious,

²⁰ Advertisement. *Amrita Bazar Patrika*, March 2, 1946, p. 7.

²¹ Advertisement. *Amrita Bazar Patrika*, Puja Number, (Calcutta, 1949), 180 and Advertisement, *Amrita Bazar Patrika*, Puja Number, Calcutta, 1950, p. 158.

²² Advertisement, *Amrita Bazar Patrika*, Puja Number, Calcutta, 1949, p. 180.

²³ Advertisement. *Sharadiya Desh Patrika*, Puja Number, Calcutta, 1956, p. 215 (Fig. 8).



knowledgeable Hindu past that had produced the proper diet. Nibaran Chandra Bhattacharya (1935, p. 15) wrote,

Long before the science of nutrition emerged, the Bengali community had devised the national diet. In the context of the present-day conflict and struggle, the Bengalis have moved from the national diet if only to suffer an overall decline in the process.

The science of nutrition, especially in the early twentieth century, started to refigure food as ‘chemical nutrients’; the relationship between ‘healthy living’ and ‘scientific cooking techniques’ began to be defined in the light of Food Chemistry.²⁴ Chunilal Bose (1930, pp. 1–2), while talking about the intimate relation between food and health, elaborated that,

The science of nutrition has now reached an advanced stage of development, and the knowledge of its principles is now more complete and accurate than at any time before, and for that very reason, it has become more complex and highly technical. The fundamental fact in nutrition is that complex chemical changes are effected in food substances by means of physiological agencies in the animal body. For a proper understanding of questions of food and dietetics, a knowledge of Bio-Chemistry is essentially necessary and this means a study of chemistry, physics and physiology... Chemists determine the composition of foodstuffs and the changes which they undergo in the process of digestion, absorption and assimilation and study their special functions in the economy and nutrition of the system.

In the opinion of Chunilal Bose, one significant advance that took place in the knowledge of the science of nutrition in the last 25 years was the discovery of Vitamins – which are

‘certain active principles’ present in most of the foodstuffs in their natural states (Bose, 1930, p. 19). Gangulee (1938), in his texts *Health and Nutrition in India* emphasized the history of food chemistry, the contribution of German chemist Justus Von Liebig in the field of food chemistry, the discovery of the chemical structure and functions of protein, the chief nutritive function of carbohydrates and fats, discovery of vitamins, dietary standards. The significance of preserving nutrients of the food stuff was increasingly highlighted in the writings of Acharya Prafulla Chandra Ray, Ramesh Chandra Ray, Nibaran Chandra Bhattacharya’s *Bangali r Khadya o Pushti* (1935), Bidhubhushan Paul’s *Khadya Tattwa* (1931), Bigyan Chandra Ghosh’s *Ahaar* (1942) and others.

Chunilal Bose, in his text *Khadya* (1924), praised the Icmic Cooker as a nice arrangement at a low cost that could prepare all food for better digestion through the slow, even cooking process using steam (Bose, 1924a, 1924b, p. 140). In the same text, he claimed that although boiled food appeared as easily digestible in comparison to fried items, yet boiling was responsible for the loss of salts-nutrients, which got mostly removed with water; however, steam cooking, especially using Icmic Cooker, would be able to solve this problem (Bose, 1920). Bose argued that “Rice-water should not be thrown away, the cooking should be done in such a way that it may be eaten along with the rice, for it contains some part of the protein, salts and vitamin present in the rice” (Bose, 1930, pp. 82–83). Bose had recommended cooking rice by not throwing away the rice-water (*fyan*) or starch which would remove the nitrogen and salts (Bose, 1920, p. 120). This appreciation and acclaim received for Mullick’s invention from a renowned Bengali medical practitioner like Chunilal Bose, who held the title of “*Rasayanacharya*” and who had worked as an Assistant Surgeon, Government’s Chemical Examiner and Professor of Chemistry at Medical College, Calcutta (Bose, 1924a, 1924b, pp. xiv–xv), brings out the acceptance of Icmic Cooker among the western educated middle class of colonial Bengal. Manoranjan Gupta, (1966), in biography on Acharya Prafulla Chandra Ray mentioned that Ray was also accustomed to using this new invention, as one such Icmic Cooker could easily be found on a large table in his room (Gupta, 1966, p. 43).

Bidhubhushan Paul’s *Khadya Tattwa* (1931), published at Dacca Medical School mentioned that Icmic Cooker would be best fit for those without time and patience. Cooking rice through steaming would be able to provide them with cooked rice with all nutrients intact (Paul, 1931, p. 106). Another advice manual entitled *Ahaar* (1942), composed by Bigyan Chandra Ghosh did not mention the exact name of Icmic Cooker. However, it was mentioned that the scientific cookers or steam cookers used in those days could cook without causing any smoke; they could keep the taste

²⁴ If one traces the roots of food chemistry, it can be found that for the chemists of the eighteenth and nineteenth centuries, an understanding of the chemical nature of food was a major objective. They realised that this knowledge was essential if dietary standards, health, prosperity were to improve. In the late eighteenth century, Swedish Chemist Carl Wilhelm Scheele (1742–1786) isolated and studied the properties of lactic acid, separated citric acid from lemon juice and gooseberry and obtained malic acid from apples. British chemist Humphrey Davy (1778–1829) published a book in 1813 which discussed some relevant aspects of food chemistry. In 1842, German Chemist Justus Von Liebig (1803–1873) classified foods as either nitrogenous (vegetable fibrin, albumin, casein, animal flesh and blood) and non-nitrogenous (fats, carbohydrates, alcoholic beverages). Liebig published in 1847 what is apparently the first book on food chemistry. In 1871, Jean Baptiste Duman suggested that a diet consisted of only protein, fat and carbohydrate was inadequate to support life. During the first half of the twentieth century, most of the essential dietary substances were discovered and characterised namely vitamins, minerals, fatty acids and amino acids. See, Tom Coultate, *Food: The Chemistry of its Components*, 6th Edn (2016); Kan and Chen edited *Essentials of Food Chemistry* (2021) and Introduction to Food Chemistry in Fennema ed. *Food Chemistry* (1996).



of meals intact and prepare healthier food (Ghosh, 1942, p. 90). This text further added a health warning regarding the metallic containers used in such cookers. Ghosh urged that the containers of the Cooker should avoid using harmful aluminum, instead, they should be made of silver or fireproof glass or porcelain to remain free from any flaw (Ghosh, 1942, p. 90). This trend of prescribing healthy and nutritious meal preparation through Icmic Cooker continued also after the Independence in 1947. One such significant text was *Bangali r Khadya* (1949) composed by Rudrendra Kumar Paul, who claimed that those households that have Icmic Cooker would not face much trouble in cooking as this Cooker would be efficient enough to cook rice easily without wasting valuable nutrients (Paul, 1949, pp. 106–107).

Prajnasundari Debi's *Amish o Niraamish Ahaar* (1900) must be highlighted while mentioning Icmic Cooker in the cookbooks of early twentieth-century Bengal composed by educated women of that time. The granddaughter of the famous Bengali religious reformer Debendranath Tagore and the wife of Assamese writer Lakshminath Bezbarua, Prajnasundari Debi (1870–1950) offered advice on the use of Icmic Cooker for various recipes which was supposed to guide the Bengali readers with an idea about this new addition in the colonial kitchen.²⁵ Her text elaborated that any vegetable could be cooked in Icmic using scientific method in such a way that it would become soft as well as extremely tasty and would be able to retain all salts and nutrients (Debi, 2000, p. 133).²⁶ Prajnasundari especially mentioned use of Icmic Cooker in case of the recipes like “*bhapa khichuri*” (steamed khichri), “*khosa suddhu aloo sed-dho*” (boiled potato with peels), “*ucche o karola bhat e*” (bitter gourd boiled with rice) and “*chhechki*” (a dish where various vegetables are cut into smaller pieces and sautéed in oil) (Debi, 2000, pp. 130–31, 135, 148, 206). She claimed that bitter gourd or potato would become tastier if cooked in steam in Icmic Cooker without using any water (Debi, 2000, p. 148). Recipes using Icmic Cooker could also be found in another cookbook *Barendra Randhan* (Cooking of the Barendra region) of Kiranlekha Ray, who died unfortunately in the midst of her work, and at the request of her daughters; her husband Saratkumar Ray published the collection in 1921. This text mentioned that the flesh of duck or rabbit could be cut in small pieces, put in Icmic Cooker, mixed with salt, pepper, ginger, and onion, and cooked in the form of tasty *Kabab* by steaming or baking (Ray, 1921, p. 67).

Binapani Debi, in the preface to her text on cookery entitled *Meyeder Picnic* aimed at young girls as her target readers who would delight their families by becoming “good

wife” and “efficient cook” in future (Debi, 1943, p. 1). The text claimed to acquaint the girls with the essential food of daily life and to inform them about cooking the meal in a healthy way. She mentioned in her book that innovations like improved stoves and Icmic Cooker have facilitated cooking (Debi, 1943, p. 23). In her words,

Medical practitioners support steam cooking as it is good for health. Dr Indumadhab Mullick has first launched his famous Icmic Cooker in the market to give the countrymen the benefit of steam cooking. In this Cooker, four kinds of food are cooked together using steam in four containers in a cylindrical unit.... This system does not require the removal of rice starch, which gets enmeshed with rice keeping the nutrients intact (Debi, 1943, p. 41).

5 Icmic Cooker in home science textbooks of the post-independence era

As India gained freedom from colonial rule in 1947, indigenous inventions in science and technology began to acquire wide currency. Icmic Cooker was no exception to this trend. Interestingly, Icmic Cooker was included in the Home Science in Bengal school curriculum.

Home Science textbooks often lamented the waste of time and energy for various household chores; therefore, suggested a solution by recommending purchase of a few new devices through proper planning to perform the household tasks methodically (Adhikari & Dasgupta, 1976, p. 55). Jyotiprabha Dasgupta, who had worked as the Head of the Department of Domestic Science at University of Calcutta and had served as the Founder Principal of Viharilal College for Home and Social Science, Calcutta, composed a school textbook *Griha Bigyan er Kotha* in 1955 as per the syllabus approved by West Bengal Secondary Education Council for the students of 7th and 8th standard (Dasgupta, 1955, pp. 189–190). It illustrated the use of Icmic Cooker in the context of steam cooking by highlighting how, in this cooker, steam gets into indirect contact with food, how sealed containers in a tiffin carrier-like unit utilize entire steam for appropriately cooking all the vegetables, by retaining all its smell and colour, and how it reduces the waste of vitamins (Dasgupta, 1955, pp. 189–190). Shovona Ghosh, in her book *Adhunik Griha Bigyan*, highlighted the benefits and procedures of using various technological innovations such as Kerosene cooker, Pressure cooker, Vegetable peelers, Heater, Egg beater, Mincing Machine and, Icmic Cooker (Ghosh, 1958, pp. 315–320).

In a latter decade, *Griha Bigyaner Goraa r Kotha*, a text book for students of ninth standard, was composed by a school teacher Sefali Nandi, who had a Diploma in

²⁵ Pragna Sundari Debi in her Introduction to the Second Edition of *Amish o Niraamish Ahaar* included notes on Icmic Cooker.

²⁶ Debi, *Amish o Niraamish Ahaar*, vol 1 Anondo Edition, (1995), 2000, first published in 1900, p. 133.



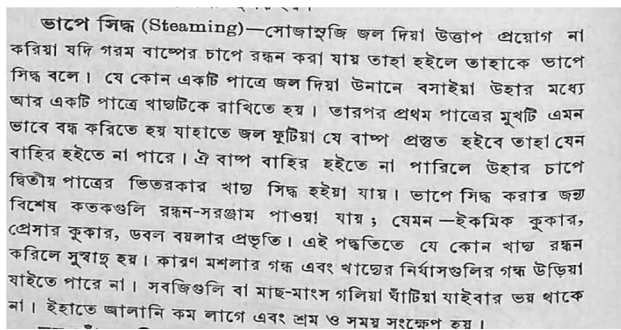


Fig. 9 Image of a page from the Home Science textbook of Sefali Nandi, 1971

Domestic Science and Dietetics as well as a Post Graduate Diploma in Home Science. This textbook, while talking about “simple methods of cooking”, mentioned in detail the process of roasting, baking, frying, boiling, stewing, steaming, seaming and braising (Nandi, 1971, p. 198). The discussion on “steaming” necessarily included the notes on the use of technologies like Icmic Cooker, Pressure Cooker and Double Boiler. (see Fig. 9).

6 Concluding remarks

Indumadhab Mallick’s scientific invention Icmic Cooker—with a promise to make cooking easier, faster, healthier—brought a culinary revolution in front of everyone. Icmic Cooker’s journey incorporated within its fold the need for cooking a complete meal in a healthy way using the principles of steaming using very little amount of time, fuel and human labour. Endeavours were taken to make the Icmic Cooker popular among the lone males residing in a city at a mess or hostel away from the lovingly served meal of their rural ancestral home and also among the housewives who were getting tutored in improved methods of cooking and also in using “modern” culinary equipment. Thus, this new cooking device received much attention in the pages of advice manuals and health guides of colonial Bengal, in the advertising columns of newspapers and periodicals, in the cookbooks and in the curriculum of schools of Bengal in post-independence era. Mullick’s Icmic Cooker became a unique popular device in the first decades of the twentieth century when understanding of nutritional science and explanation of food as chemical nutrients had started to inform the life of Indian middle class in various ways; Icmic Cooker also served as a stimulus for many such future culinary inventions.

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