

Sir Asutosh Mookerjee – Educationist, leader and institution-builder

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In a tribute to his grandfather, Sivatosh Mookerjee wrote¹ this about Asutosh Mookerjee: 'When I look back into the history of his time to comprehend the gradual emergence of a man as a destiny maker, I am impressed by three principal phases, one followed by the other in the unfolding of his life. The first phase of his career was as a votary of mathematics, the second phase as a devotee of law, and the third phase as a creator and builder of the University. Though ultimately Sir Asutosh was more known for the third phase of his work with the University, the two earlier phases of his life were equally important in making what he would eventually become'.

It is this third phase of Asutosh, the educationist and the builder of a University, that we are going to delineate in this paper.

It is nearly impossible to do justice to the colossal services rendered by Asutosh in establishing modern education in Bengal and making it accessible to a larger section of the population. One can, however, highlight three major aspects of his efforts and his contributions.

(i) Asserting himself, often in a hostile environment during the height of the British rule, with the sole objective of elevating education in Bengal to its pinnacle.

(ii) Introducing western science through the English language but at the same time making arts, Indian philosophy, literature and languages major subjects of study.

(iii) Converting Calcutta University from an examining and affiliating organization to a Centre of post-graduate research and teaching and raising funds for the purpose from Indian philanthropists and attracting the most talented persons to carry out independent research and teaching.

The vision of Asutosh was boundless, his ability extraordinary and his courage

earned him the popular title of 'The Bengal Tiger'. Excerpts from the writings of Rabindranath Tagore and Michael Sadler on the untimely death of Asutosh in 1924 summarize succinctly his great vision and abilities.

Tagore wrote: 'Men are always rare in all countries through whom the aspiration of their people can hope to find its fulfilment, who have the thundering voices to say that what is needed shall be done; Asutosh had the magic voice of assurance. He had the courage to dream because he had the power to fight and the confidence to win – his will itself was the path to the goal'.



Michael Sadler who was the Chairman of the Calcutta University Commission (1917–1919) of which Asutosh was a member, wrote, 'In Asutosh Mookerjee India has lost one of her greatest men; the world one of its commanding personalities. He was mighty in battle. He could have ruled an empire. But he gave the best of his powers to Education because he believed that in Education rightly lies the secret of human welfare and the key to every empire's moral strength'.

That was Asutosh and in writing about him as the educationist it may not be irrelevant to give a brief account of his ancestry and his very significant academic achievements and a glimpse of the educational and political environment that prevailed in Bengal before and during his time.

A brief life sketch

Asutosh Mookerjee (Mukhopadhyay) was born in Calcutta on 29 June 1864. His father Gangaprasad Mukhopadhyay was a well-known physician and his mother Jagattarini Devi was known to be a woman of courage and considerable strength of character. It is believed that the great Krittibas who wrote the first Bengali version of the *Ramayana* was the ancestor of Asutosh. So was Ramchandra Tarkalankar who was appointed by Warren Hastings to the Chair of Nyaya in the newly founded Sanskrit College. Gangaprasad lost his parents early in life and through great hardship studied in the Presidency College, Calcutta and then in the Medical College. He wrote a number of books in medicine and till the end of his day would not charge his patients more than Rs 2 per visit. Jagattarini Devi would not let Asutosh go to England when the Viceroy Lord Curzon personally nominated Asutosh as the representative of Calcutta citizens to attend the coronation of King Edward VII. For Asutosh his mother's wishes were more important than the Viceroy's commands and he never left the shores of India.

At the age of five, Asutosh entered a primary school where he studied for two years. Then he studied at home for some time before joining South Suburban School. In November 1879, Asutosh passed the matriculation examination being placed in the second rank and joined the Presidency College. When he was only a first year student, Asutosh published his first paper in which he gave an elegant new proof of the 25th

proposition of the first book of Euclid. His third paper, 'A note on elliptic functions' published when he was in his MA class, was considered by Cayley of Cambridge as a contribution of 'outstanding merit'. In 1884, Asutosh topped the list of successful candidates in the BA examination winning the Harishchandra Prize and continued his post-graduate studies and was placed first in first class in MA in Mathematics in 1885 and MA in Natural Sciences in 1886. He won the prestigious Premchand Roychand studentship the same year on the result of a competitive examination. In 1888, he took the BL degree and enrolled himself as a Vakil of the Calcutta High Court. During the ten years from 1880 to 1890 when he was preparing for various examinations, Asutosh published nearly twenty original mathematical papers of high quality and merit (see Box 1). By the year 1893, when he was 29 years old, Asutosh had been elected Fellow of the Royal Society of Edinburgh, of the Society de Physique of France and of the Royal Irish Academy. He became a member of

the American Mathematical Society in the year 1900 and in 1908 the Doctor of Sciences, *Honoris Causa* was conferred on him by the Calcutta University. While Asutosh established his credentials in the scientific world, he received the Doctorate of Law based on a thesis and in 1897 he was elected as the Tagore Professor of Law.

The high offices held by Asutosh were equally impressive. He became a member of the Syndicate of Calcutta University when he was 25 years old. He was appointed a Judge of the Calcutta High Court in 1904 and acted as the Chief Justice for a couple of years. Nearly 2000 cases on which he gave his judgement are still quoted as Masterpieces of judgement. Asutosh took a great deal of interest in the affairs of the Calcutta University. His long and intimate association with the University as a member of the Senate and Syndicate for over 16 years and services rendered by him including 11 years as President of the Board of Studies in Mathematics, representing the University in the Bengal Council from 1899 to 1903, Addl.

Member of the Viceroy's Council representing Bengal during 1903–04 and Member of the Indian Universities Commission in 1902, made him the most competent candidate for taking over the charges of the Calcutta University and in 1906 he was invited by Lord Minto to take over as the Vice-Chancellor of the University of Calcutta, a position he adorned for four consecutive terms till 1914. He again served as the Vice Chancellor from 1921–23.

Asutosh was knighted by the British Government in 1911. He founded the Calcutta Mathematical Society, was the first President of the Indian Science Congress in 1914 on its being founded. Asutosh died on 25 May 1924 in Patna where he had gone to argue as an advocate in the celebrated case known as Dumroan Raj Case. His body was brought to Calcutta for cremation and a huge crowd paid tribute to the great departed soul².

Emergence of western education in Bengal

The monumental contributions of Asutosh to the cause of education can be best appreciated when placed in the perspective of the educational situation that existed in Bengal during his time. More than a hundred years before his birth, the British were establishing their rule. The country was passing through one of its stagnant periods when Raja Rammohan Roy appeared like a mighty river, as described by Tagore, rejuvenating life along its banks. There were others such as William Carey, Rev. Alexander Duff, David Hare, to name only a few, who tried to introduce Western education in India. Calcutta Madrasa was the first educational institute set up by Warren Hastings in 1781 for imparting English education. The Asiatic Society was set up (1781) through the initiative of Sir William Jones, followed by the establishment of the Sanskrit College at Varanasi in 1792. The British Parliament, in renewing the charter of the East India Company in 1813 introduced a section which pledged the Government of India to set apart annually at least Rs 1 lakh for education of people residing in the British territories in India both for reviving as well as improving the indige-

Box 1. Mathematical papers by Asutosh Mookerjee

1. Proof of Euclid I, 25, *Messenger of Mathematics*, 1888, **10**, 122–123.
2. Extension of a theorem of Salmon's, *Messenger Math.*, 1883–84, **213**, 157–160.
3. A note on elliptic functions, *Q. J. Pure Appl. Math.*, 1886, **21**, 212–217.
4. On the differential equation of a trajectory, *J. Asia Soc. Bengal*, 1887, **56**, 117–120.
5. On Monge's differential equation to all conics, *J. Asia Soc. Bengal*, 1887, **56**, 134–145.
6. A memoir on plane analytical geometry, *J. Asia Soc. Bengal*, 1887, **56**, 288–349.
7. A general theorem on the differential equations of trajectories, *J. Asia Soc. Bengal*, 1888, **57**, 72–99.
8. On Poisson's integral, *J. Asia Soc. Bengal*, 1888, **57**, 100–106.
9. On the differential equation of all parabolas, *J. Asia Soc. Bengal*, 1888, **57**, 316–332.
10. Remarks on Monge's differential equation to all conics, *Proc. Asia Soc. Bengal*, February 1888.
11. The geometric interpretation of Monge's differential equation to all conics, *J. Asia Soc. Bengal*, 1889, **58**, 181–185.
- 12, 13. Some applications of elliptic functions to problems of mean values; First and Second Papers, *J. Asia Soc. Bengal*, 1889, **58**, 199–213; 213–231.
14. On Clebsch's transformation of the hydrokinetic equations, *J. Asia Soc. Bengal*, 1890, **59**, 56–59.
15. Note on Stoke's theorem and hydrokinetic circulation, *J. Asia Soc. Bengal*, 1890, **59**, 56–61.
16. In a curve of aberrancy, *J. Asia Soc. Bengal*, 1890, **59**, 61–63.
17. Mathematical Notes (Questions and Solutions), *Educational Times*, London, 1890–92, **43**, 125–151; **44**, 144–182; **45**, 146–168.

From ref. 8.

nous system of education and also for the promotion of knowledge in sciences among them. Anxious that this meagre amount of money would be utilized only for the revival of ancient system of education, Rammohan Roy in his letter to Amherst wrote: 'But as the improvement of the native population is the object of the Government it will consequently promote a more liberal and enlightened system of instruction embracing mathematics, natural philosophy, chemistry, anatomy with other modern sciences which may be accomplished with the sums proposed, by employing a few gentlemen of talent and learning and education in Europe and providing a college furnished with necessary books, instruments and other apparatus'.

Dwarkanath Tagore supported Rammohan Roy as did David Hare and a few others who helped the foundation of the Hindu College in 1817 to promote a liberal education. Hindu College was renamed Presidency College in 1857. It was Macaulay – and the famous resolution of Lord William Bentinck that resolved in favour of Anglicism as against the so-called Orientalism – who made a knowledge of English compulsory for those who aspired to a high order of education. Meanwhile, with the relentless efforts of the Bengali Aristocracy, the Medical School was set up in Calcutta in 1822 which later became the Medical College.

British attitude towards higher education in India

Although a number of liberal minded English educationists and Christian missionaries helped the setting up of schools and colleges, it was not until 1855 following 'the Wood's despatch of 1854', that decision was made to set up the Universities of Calcutta, Madras and Bombay.

Charles Wood's correspondence with Dalhousie gives a clear idea of the British attitude towards higher education in India. Ellenborough warned Woods that 'Education will be fatal to British rule' and whereas Wood felt British administration in India could be strengthened if it could utilize the services of educated natives by imparting higher education to them by establishing universities, he had his apprehensions.

'If they become intelligent through education, they become dangerous', and he felt that it would be better to direct educational efforts to general elementary education. At the same time to have educated natives with University education would be according to Wood, '... the easiest step ... I do not say the most useful', for carrying British Indian administration.

Wood did not have much misgivings about Bombay and Madras. But Dalhousie was keen on setting up the Universities in all three cities and Wood appear to have yielded. But Wood wrote: 'I care very little about teaching Hindus to read Bacon and to be examined as we should be for honours at Oxford. I have no objection to their acquiring that education but I am against paying them for acquiring it as we do in government schools ... these highly educated natives are likely to be a very discontented class unless they are employed and we cannot find employment for them all'^{2b}. He wrote again^{2c} 'If they choose to educate themselves, well and good, but I am against providing our future detractors, opponents and grumblers'.

Dalhousie did not fully agree with Wood and he was largely responsible for continuing senior scholarships². So the University of Calcutta was founded on 24 January 1857. The preamble stated the objects of the Act – 'Better encouragement of Her Majesty's subjects of all classes and denominations, ... in the pursuit of a regular and liberal course of education and for the purpose of ascertaining by means of examination the persons who have acquired proficiency in different branches of literature, science and art and/or rewarding them by academical degrees'. The preamble seemed noble in its objective and the product of the University did strengthen, as was expected, British Indian Administration, but Wood's apprehensions were not belied. The belligerence that the British faced in Bengal, which led to the partition of Bengal in 1905, clearly took shape in the minds of those who had received University education. But one must hasten to add that the Bengal renaissance that took place during this period, enriched as it must have been by exposure to western culture, was not encouraged by the University education, which was influenced

by Macaulay's despise for Indian literature, heritage and culture, his unshaken view and that of his followers, that western education represented the triumph of reason over barbarism.

The renaissance took place when Indians of great mental abilities rediscovered their own heritage, helped to some extent by the western angle of vision. Rammohan Roy, Iswar Chandra Vidyasagar, Modhusudan Datta, Bankim Chandra Chattopadhyay, Rabindranath Tagore, Swami Vivekananda and Aurobindo were some of those great minds who rediscovered India's philosophical and literary heritage and brought about the Bengal renaissance. Modhusudan's *Captive Lady*, a book of poems in English, made little dent anywhere but his *Meghnadavad Kavya* inspired by the *Ramayana* had considerable impact. Modhusudan and Bankim Chandra gave a great thrust to Bengali literature which Rabindranath carried to much greater heights.

The University neither intended nor did it try to pass on the treasure of Indian heritage to us. It was left to Asutosh who was a product of western education but very much moulded by Indian tradition and culture to give University education in Calcutta a new direction.

It needs to be mentioned in this context that true to the recommendations of Wood, the Government was reluctant to spend much money on higher education and according to the convocation address of W. W. Hunter in 1887, 'This University receives no grant whatever from the State' and according to H. J. Reynolds, Vice-Chancellor (1883), the Government was responsible for the payment of only 40% of the whole expenditure on primary, secondary and higher education, 60% being contributed by the people themselves. It will be discussed later how a number of Indian philanthropists came forward with generous contributions to promote higher education in India.

The University Act of 1904

Although the Government was not very keen on financially supporting higher education, it was keen on controlling University affairs as much as possible. In 1904, during Curzon's Viceroyalty, a new University Act was passed. The

Home Department proceedings of November 1904 record, Government plans for different Universities with a view to ensuring European ascendancy. The confidential circular on the election and nominations of fellows contains the following directive – 'Our action in respect of the formation of the new Senate will be liable to be vehemently attacked by the opponents of the Universities Act and it is desirable to avoid the appearance of giving an undue preponderance to the representatives of official and departmental interests. We must, however, have a working majority in favour of our views'.

This Act was opposed by Gopala Krishna Gokhale and Asutosh Mookerjee. Rabindranath Tagore in an article published in 1904 strongly criticized the bill. The reasons for the persistent and virulent opposition to the bill may be better understood from an honest summary made in the Sadler Commission report of 1919. Asutosh was a member of this Commission: 'Perhaps the main result of the Act was to make the control and supervision of the Government over University Policy more direct and effective than it had hitherto been. Not only was the Viceroy as Chancellor, empowered in overwhelming majority of the Senate (a possible 80 of the non-official members) his approval was made necessary for the election of remaining 20; and the Government of India retained the power conferred upon it by the Act of 1857, of cancelling any appointment. Moreover, the Vice-Chancellor, the Chief Executive Officer of the University, was to be appointed by the Government; all regulations of the University must be submitted to the Government for its approval; all affiliations and disaffiliations of College must be determined by it; all professors, readers and lecturers of the University must be approved by it; in short, almost every detail of University policy was made subject to its supervision'.

Soon after the passing of the University Act of 1904, Bengal was thrown into a turmoil by the partition of the province which came into effect from October 1905 in spite of violent opposition from the people. The political agitation following the partition resulted in a large body of students leaving government controlled schools and col-

leges, either voluntarily or due to expulsion. The leaders involved in the agitation were faced with the problem of providing education to these students and a proposal for setting up of 'A National Council of Education' was taken up. Despite disagreements and controversies 'The Bengal National College and School' was set up mainly for Humanities and the Council contained as its members Goorodas Banerji, the first Indian Vice Chancellor of the Calcutta University, Rashbehary Ghosh, Asutosh Chaudhuri, Raja Subodh Chandra Mallik and Rabindranath Tagore. The other group which emphasized technical education consisted of Taraknath Palit, Nilratan Sircar, Nagendranath Ghosh and Rashbehary Ghosh who belonged to both the committees. They started the Bengal Technical Institute. The controversies that raged between the Orientalists and the Anglicists preceding the introduction of Western education referred to earlier, reappeared again and the suitability of Bengali as medium of instruction became an important item of controversy.

Asutosh as Vice-Chancellor and his contributions

It was at this juncture, when Bengal was passing through a major political upheaval and the credibility of the Government *vis-à-vis* the administration of the Calcutta University was at an all time low, that Minto invited Asutosh Mookerjee to take over the Vice-Chancellorship. The Home Secretary, H. H. Risley made the strongest possible recommendation in favour of his appointment as an academic of great distinction, but he also stated that 'Mookerjee can be trusted to carry out the policy of Government in University matters'. Risley also wrote: 'The appointment of a distinguished Indian as Vice Chancellor would undoubtedly be popular and would tend in some degree to discourage the idea that the sole purpose of the Universities Act was to tighten official control over the Universities'.

Asutosh: His fearless pragmatism

Risley was absolutely right in assessing the qualities of Asutosh as the most

competent person to take over 'the most important honorary office in the gift of the Viceroy' (in the words of Carmichael) but Risley had not fully comprehended that Asutosh was fiercely independent. It was however true that 'he was not a relentless critic of the Government. His criticism was always measured, straight and fearless¹', and this, combined with his great scholarship persuaded the British Government to retain his services as a Vice Chancellor for a total of five terms. Asutosh could continue in this high office so long because he enjoyed the trust and confidence of his own people. Surendra Nath Banerjee paid tribute to Asutosh in the following words: 'It is right to say he enforced the regulations with a measure of discretion, a regard for all interests that partly allayed suspicion and anxiety they had created in the minds of the educated community in Bengal'.

A major political triumph Asutosh scored in the first year of his Vice-Chancellorship was to oppose the recommendations of Bamfylde Fuller of Eastern Bengal and Assam to disaffiliate a number of schools because a number of boys in these schools had taken part in the anti-partition agitation. Asutosh used utmost tact in convincing Minto that such a move would be unfair and unwise. Minto accepted the advice of Asutosh. Fuller resigned and in his letter dated 3 August 1906 wrote: 'To withdraw from our position in the case would be to make a concession not to the interest of education but to those people in Calcutta who have been striving to render my Government impossible'. Minto promptly accepted the resignation of Fuller and in reference to Asutosh in his letter to Morley written on 23 January 1907, he wrote: 'His evident force of character has impressed me'. This force of character showed itself time and again, often to the embarrassment of the Government. In his famous speech in the Senate (December 1922) Asutosh said '... I call upon you, as members of the Senate to stand up for the rights of your University. Forget the Government of Bengal. Forget the Government of India. Do your duty as Senators of the University, as true sons of your Alma Mater. Freedom first, freedom second and freedom always – nothing else will satisfy me'. This did

not make Asutosh very popular with the British as we shall presently see.

In the same context, it needs to be noted that Asutosh opposed the national education movement and regarded as a national calamity that more than 50,000 students who had left schools and colleges were idling when they should have been studying. His aim was to guide the young generation between the two pitfalls, 'obsequiousness and intransigence'. He achieved what he did, to be described briefly in the pages that follow, only by his pragmatic approach. But as quoted earlier, he repeatedly stood firm whenever there was any attempt by the Government with the running of the University. In an address in 1923, Asutosh said, *'We stand unreservedly by the doctrine that if education is to be our policy as a nation, it must not be our politics; freedom is its very life blood, the condition of its growth, the secret of its success... there stands forth unshaken the conviction that our insistent claim for the freedom of the University is a fight for the most sacred and impalpable of national privileges'*.

Asutosh was requested to take over as Vice-Chancellor on 24 March 1921, despite his past records of refusal to accede to Government policies whenever he felt such policies would harm academic interest or seek his subservience. Asutosh accepted the offer, but two years later in 1923 in an offer to renew the contract Lytton, the Chancellor wrote: 'If you can give an assurance that you will not work against the Government or seek the aid of other agencies to defeat our bill, then I am prepared to ask the concurrence of my Minister to your re-appointment as Vice-Chancellor'.

Asutosh's reply to this letter is worth reading in full. A brief extract may convey the spiritedness that guided him in his dealings with the British authority: '... I shall finally consider your offer to re-appointment as Vice-Chancellor subject to a variety of conditions. There are expressions in your letter which imply that I am an applicant for the post and I am in expectation of re-appointment. Let me assure you that if you and your minister are under such an impression, you are entirely mistaken.... It may not be impossible for you to secure the services of a subservient Vice-

Chancellor, prepared always to carry out the mandates of your Government and act as a spy on the Senate. He may enjoy the confidence of your Government but he will not certainly enjoy the confidence of Bengal. ... I send you without hesitation the only answer an honourable man can send – an answer which you and your advisers expect and desire. I decline the insulting offer you have made to me'².

Asutosh resigned as the Judge of Calcutta High Court around this time and resumed his practice as a lawyer. The somewhat detailed account of the political situation in Bengal and the manner in which Asutosh held his own with the sole objective of setting up an University with a high standard were meant to establish the great leadership quality of the person who fought against all odds to achieve what he set his heart to achieve.

The academic philosophy of Asutosh

The following sections elucidate the academic philosophy that guided Asutosh, to synthesize the best of Western and Indian culture and education in the precincts of his University.

Asutosh was a firm believer that we should learn science in English. To quote him from his convocation address (1908): '... European knowledge should be brought home to our students through the medium of English – that western light should reach us through western gates and not through lattice work in eastern windows'.

In his address at Mysore he said 'we cannot sit on the lovely snow-capped peaks of the Himalayas absorbed in contemplation of our glorious past. We cannot waste precious time and strength in defence of theories and systems which, however valuable in their own days, have been swept away by the irresistible avalanche of worldwide changes. ... we can live neither in nor by our defeated past and if we would live in the conquering future, we must dedicate our whole strength to shape its course ... let us raise an emphatic protest against all suicidal policy of isolation and stagnation'³. In higher learning and teaching he preferred to follow the western model. At the same time

Asutosh was anxious to usher in vernaculars and extensive studies of Indian languages, Indian history and philosophy.

As far back as 1886, Chittaranjan Das tried to induce the University authorities to admit Bengali as a second language for the entrance and first arts examinations. Later in his convocation address (1891), the Vice-Chancellor Goorodas Banerji said, 'I deem it not merely desirable but necessary that we should encourage the study of those Indian languages that have a literature by making them compulsory subjects in our examinations in conjunction with their kindred classical languages'. Asutosh took up the matter and proposed that Bengali, Hindi and Urdu should be included in the courses for FA, BA and MA examinations. This proposal was supported in the Faculty by Bankim Chandra Chattopadhyay. It was not, however, accepted. Goorodas Banerjee himself made the same proposal but it was turned down. But as the Vice-Chancellor, Asutosh succeeded in persuading Senators and the Government 'to recognize the elementary truth that if Indian Universities are ever to be indissolubly assimilated with our national life, they must ungrudgingly accord due recognition to the irresistible claim of Indian Vernaculars'.

It may be interesting to note in this context that the history of England was dropped out from the syllabus of matriculation examination since it was surmised that '... at the bottom of the new spirit of Bengal was the careful study of the history of England'². Curzon in a letter dated 14 February 1900, wrote to Francis Maclean, the Vice-Chancellor of Calcutta University, 'Dear Sir Francis Maclean, more circumspection is required in the selection of the textbooks for the different educational courses. ... The list, for instance, of books prescribed in the course of reading at the Calcutta University is not from our point of view all that is desirable. It will be sufficient to mention Burke's French Revolution, which is one of the textbooks prescribed for the BA examination of 1901. No one will deny that the book is a model of English style but the matter of it might be harmful even to some English readers and it is certainly dangerous food for Indian students...'. This letter goes to show how the Government continued to

interfere with education. When Asutosh became the Vice-Chancellor he realized the futility of trying to reopen the controversy that raged about the omission of history of England, from the matriculation examination. He included Indian history in the curriculum instead.

Asutosh was deeply impressed by the model of German Universities and 'its aim to offer facility for instruction in all branches of human knowledge'⁴. In his address at the special convocation (February 1911) convened to award an honorary degree to the Crown Prince of Germany, the Vice-Chancellor mentioned: 'I may be allowed to single out two features of those German institutions which appear to be specially worthy of attention. In the first place, the admirable way in which they manage to combine the functions of teaching and original investigations, on the one hand, exalts and ennobles teaching, and on the other hand, enormously stimulates, facilitates research. In the second place, the width of intellectual interests which those institutions represent, is truly astonishing; the learned men of German Universities have taken for their province, the whole of Nature and the whole of Humanity; the intellectual curiosity that prompts them is unbounded, their sympathies are universal'³.

It was to this level of excellence that Asutosh tried to elevate University education in Bengal in a systematic and pragmatic manner.

His academic programme: Emphasis on teaching and research

Although Asutosh was associated with the Calcutta University for sixteen years prior to his appointment as Vice-Chancellor in 1906, he could put into effect his academic programme during the eighteen years that followed. This period may be broadly divided into three sections. During the first two years (1906–08), the reorganization of the University in accordance with the requirements of the new Universities was undertaken, the second period extending from 1909 to 1914 was devoted to preparing the ground and materials for post-graduate teaching and research, the rest of the period for consolidation and further enhancement of post-graduate research activities.

Although the Universities' Act of 1904 was an attempt by the Government to lay a firm grip on University administration, it made a major concession that Asutosh decided to capitalize on. This Act permitted teaching and that is what Asutosh set his heart on developing as a major activity of the University. Asutosh knew that active research involvement of faculty members is a prerequisite for proper post-graduate teaching. In his convocation address in 1912, Asutosh said: 'That in order to bring the post-graduate teaching up to the standards of the best of the western universities, more diversification and specialization in the post-graduate courses was necessary. The lecturers selected for such teaching should be specialists in their particular branches of study, who could give the students the results of the latest study on the subject; these were not to be found in the textbooks but had to be gathered from specialist journals'.

Fund raising

But these efforts needed funds and as has been mentioned earlier, Government was not so favourably disposed towards providing funds for education, especially for post-graduate studies. Curzon had, in fact, tauntingly told G. K. Gokhale and Asutosh Mookerjee that there were plenty of 'moneyed men' in India who should come forward with endowments to the Universities. This was a challenge for Asutosh and during the period 1908–22, the Calcutta University received in donation a sum of Rs 45 lakhs, out of which Rs 40 lakhs was earmarked by the donors for pure and applied sciences. A donation of Rs 14 lakhs from Tarakanath Palit (in June and October 1912) and Rs 10 lakhs from Rashbehary Ghosh in 1912 enabled Asutosh to start the Departments of Physics, Chemistry, Applied Mathematics and Applied Botany. The departments of Physics, Chemistry, Applied Mathematics and Experimental Psychology were housed in the grandiose building at 92, Upper Circular Road (popularly known now as the Science College) donated by Tarakanath Palit who also donated a house in Ballygunge Circular Road. Asutosh's dream was expressed in the Convocation address of 1908. 'I hope the concept of research

has come amongst us to stay and will spread throughout the land from peak to peak like the signal fires described by the Greek dramatists of old times'.

In 1909 Upendra Nath Brahmachari (of the Kala-azar fame) and Adityanath Mukherjee took their doctorate degrees. In 1910 Brojendra Nath Seal, Hiralal Haldar and Syamaprasad Mukhopadhyay took theirs. The contributions of Asutosh in strengthening post graduate education in Calcutta are best described in the words of C. V. Raman⁵: '... Thus a decade ago there was at Calcutta a total lack of anything akin to teaching and research in physics. No doubt the subject figured in the curricula of the University, but the higher teaching had latterly been weak, particularly as regards mathematical physics and research was absolutely at a standstill. A new impetus was required and it was not long in coming'.

The new impetus refers to Asutosh Mookerjee's introduction of a set of New Regulations which strengthened teaching in physics and mathematics⁶.

Asutosh was equally alert about strengthening the teaching of arts subjects at master's levels as his letter (see Box 2) to H. M. Percival of Calcutta Presidency College will indicate. This letter also shows Asutosh's concern about training lecturers for teaching students at colleges and preparing grounds to broaden higher education in the country and sustaining it.

Genius anticipates experience

In 1916 the classes in physics, chemistry and mathematics were opened. Amongst the young scientists appointed as lecturers were M. N. Saha, S. N. Bose, S. K. Mitra (physics); J. C. Ghose, J. N. Mukherjee and P. Ray (chemistry); and S. K. Banerjee (applied mathematics). Among the professors were P. C. Ray, Ganesh Prasad, P. C. Mitter and C. V. Raman. Asutosh had an extraordinary knack to pick talents. Raman was virtually an unknown officer of the Indian Accounts Service who spent his evenings in research in the Indian Association for Cultivation of Science, in Bowbazar. Asutosh, much against opposition, offered him the prestigious Palit Chair in Physics since he was fully aware of the excellence of Raman's publications and the recogni-

Box 2. A letter from Asutosh Mookerjee to Prof. H. M. Percival, his old teacher of English in the Presidency College, Calcutta

Senate House
Calcutta
The 16 October 1912

My dear Sir,

I trust you will forgive me, if I venture to trouble you even in your retirement; but I cannot forget that I owe my success in life very much to the early training I received from you and I still venture to entertain the hope that you are kindly disposed to me.

Since you left this country, I have endeavoured to develop post-graduate study in this university. Since the new Regulations came into force, MA teaching has been attempted in two or three colleges, and even that on a somewhat limited scale. This I have felt, if allowed to continue, is likely to hamper the progress of high education in this country. We have seven hundred schools within our jurisdiction and the time may be far distant when it will be possible to have in many of them good MA teachers. But what about the fifty colleges affiliated to the university? We have been insisting that each college should have on its staff at least two good MAs in each subject. How can this be realized, unless the university turns out, year after year, a fairly large number of well trained MAs? I have consequently organized this year university MA lectures on a somewhat extensive scale in Pure Mathematics, History, Economics, Arabic, Persian, Sanskrit, Mental and Moral Philosophy and English. We have in each subject a number of paid lecturers who lecture regularly so as to be able to cover the course in their respective subjects in two years. The system has been very successful, and at the present moment there are more than five hundred students reading for the MA degree under the direct control of the university; in some of the subjects, the number of students is quite high, for instance, we have as many as 90 in Pure Mathematics and 7 in English. The one subject in which I have great difficulty in getting suitable professors is English. I have induced Mr. Herambachandra Maitra of the City College to give four lectures a week and Mr Rabindranath Dutta, MA, who took his degree both here and at Cambridge, gives six lectures a week. But these two cannot possibly cover the whole course, and the students are naturally disappointed, specially when they compare the provision made for students in some of the other subjects. Under these circumstances, my mind naturally goes back to you as the only scholar who could do justice to any considerable portion of the MA course in English. I have hesitated for many weeks and doubted whether it would be fair on my part to approach you with such a request after your retirement. But I have ultimately, very selfishly, perhaps, decided to trouble you, because, as the Sanskrit poet says, the distressed man is likely to be unreasonable. I feel convinced that if I could only induce you to come back to this country, the question of post-graduate teaching in English by the university would be instantly solved. Nothing could be better for our students than lectures by you, say 8 or 10 h a week, for which the university would be prepared to offer an honorarium of Rs 500 a month; and if you so desire, the appointment can be guaranteed, say, for five years. You will find no difficulty so far as library is concerned, because I have just got a lac for books, out of which sum we could certainly spend, if necessary, five to ten thousand rupees for the purchase of books suitable or necessary for post-graduate work in English. The work covers about 25 weeks in the year and the classes are closed for about 12 weeks in summer, 4 weeks during the Durga Puja holidays and 2 weeks during Christmas. I trust you will consider sympathetically the appeal I am making to you and should you feel inclined to consider the proposal favourably, there is plenty of time to discuss and settle details, because I am not expecting to be able to induce you to be here before July when our next term begins. Of course if you could come this year, during winter, we shall all be delighted.

I recently met your brother who had come down to Calcutta on professional business and I was very pleased to hear from him that you are in good health.

Believe me,
Yours sincerely,
ASUTOSH MOOKERJEE

tion he had already received abroad⁴. Raman accepted the offer and the rest of the story is too well known to be recounted.

S. Radhakrishnan, a relatively unknown lecturer at Mysore University, was offered a professorship by Asutosh and brought to Calcutta University. A number of persons who were hand-picked by Asutosh in various positions

in the science and arts faculty of the Calcutta University earned international fame and Calcutta University came to be known as a Centre of Excellence. In his 1920 Convocation speech Nilratan Sircar read out the names of twelve different departments of learning in arts and six in science. The classes in the arts department were by now attended by 1300 students and those in science by

200 students, with 130 teachers in the former and 48 in the latter departments. Asutosh came under severe criticism for carrying out such rapid expansion of post-graduate courses and for his autocratic way of carrying out his decisions. But Asutosh knew what he was doing. Describing Asutosh as a genius, Radhakrishnan said in the opening of 'The Asutosh Institute of Languages in Cal-

cutta' on 25 June 1964, 'Genius anticipates experience' and that is what Asutosh did.

Asutosh could become a mathematician of world rank if he had chosen to confine himself to the pursuit of mathematics alone. However, despite all his preoccupations, Asutosh founded the Calcutta Mathematical Society in 1908 and as President, guided its activities until his death. He was a luminary in legal profession but he decided to serve his country in a manner he thought was the best, to take the best out of western education and Indian heritage and set up a University of great distinction to stimulate the minds of young Indians. 'The term "Sanskrit" though composed of eight letters connotes in the domain of knowledge an empire by itself', he used to say and he set about promoting research in Sanskrit, Pali and Tibetan while he was going about promoting research and teaching of physics, chemistry, mathematics and biology in the best of western traditions.

In conclusion, I am tempted to quote again from Tagore on Asutosh Mookerjee: 'I have clearly felt the greatness of Asutosh as revealed in his essay, "The

Future of Indian Literature"', where he has outlined his noblest ideas and aspirations with the whole of India as its background. He boldly employed his creative faculties at the University against all heavy odds. Here he was engaged in the task of liberating the mind of the whole of India and laying the foundation of the treasure house of knowledge. With his extraordinary achievement and breadth of vision he aimed at providing for the future a stable and permanent haven for the entire country and attempted to set up a lasting memorial on the extended basis of that instruction. I have realized the essential nature of his sublime ideal and I pay homage to the great intellect that has departed for ever'.

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