Government of Bengal. } 1906 ~~1907~~ { GENERAL DEPT.

EDUCATION.

JANUARY. G.P.I File ~~No. 46~~ 46/3

Nos. 3—27.

Presidency College.

(Proposed removal of the College to a new site.)

LIST OF PAPERS.

3-8. Circular to Sir Guru Das Banerjee, Kt., and certain other gentlemen, No. 9T.—G., dated the 17th May 1905, forwarding, for opinion, certain papers regarding the proposed removal of the Presidency College to a better site in the suburbs of Calcutta.

9. Letter from Sir Guru Das Banerjee, Kt., dated the 23rd May 1905,

10. Letter from the Revd. Alex. Tomory, dated the 25th May 1905,

11. Letter from Mr. E. DuS. Prothero, dated the 26th May 1905,

12. Letter from the Revd. Alex. Tomory, dated the 27th May 1905,

13. Letter from the Commissioner of the Presidency Division, No. 21, dated the 30th May 1905,

} giving their opinion on the question.

14-15. Letter from the Meteorological Reporter to the Government of India, dated the 8th June 1905,

16. Letter from Babu Sita Nath Roy, dated the 12th June 1905,

17-18. Letter from Mr. J. A. Cunningham, dated the 17th June 1905.

19. Letter from the Commissioner of the Presidency Division, No. A, dated the 17th June 1905,
20. Letter from Rai Chuni Lal Bose, Bahadur, dated the 22nd June 1905,
21. Note by the Hon'ble Mr. K. G. Gupta, dated the 24th June 1905,
22. Letter from the Revd. A. B. Wann, dated the 1st July 1905,
23. Letter from Dr. E. D. Ross, dated the 8th July 1905,
24. Letter from Khan Bahadur Seraj-ul-Islam, dated the 15th July 1905,
25. Letter from Babu Bhupendra Nath Bose, dated the 11th August 1905,

} giving their opinion on the question.

26. Resolution by this Government, No. 2624, dated the 13th November 1906, publishing the papers in the *Calcutta Gazette*, inviting the opinion of public bodies, associations and other persons interested in the future of the College on the question of its removal.
27. Letter to the British Indian Association and certain other Associations, etc., Nos. 91—100, dated the 22nd January 1907, forwarding a copy of the Resolution, and inviting their opinion on the question of the removal of the College.

Removal of the PRESIDENCY COLLEGE.

[Nos. 3-8.]

[File 4-C 25 16]

Circular No. 9T.—G., dated Darjeeling, the 17th May 1905.

From—H. W. C. Carnduff, Esq., c.i.e., i.c.s., Officiating Secretary to the Government of Bengal, General Department,

To—(1) Sir Guru Das Banerjee, Kt.; (2) the Hon'ble Babu Bhupendra Nath Bose; (3) the Hon'ble Justice Sarada Charan Mittra; (4) the Hon'ble Justice Ashutosh Mukherji; (5) the Hon'ble Mr. K. G. Gupta, i.c.s.; (6) the Commissioner of the Presidency Division; (7) Babu Nalin Behari Sarkar; (8) Maulvi Seraj-ul-Islam, Khan Bahadur; (9) Dr. P. K. Ray; (10) Dr. E. D. Ross; (11) G. W. Küchler, Esq.; (12) M. Prothero, Esq.; (13) J. Cunningham, Esq.; (14) V. H. Jackson, Esq.; (15) the Revd A. B. Wann, Prinicipal, General Assembly's Institution; (16) the Revd. A. Tomory, (Duff College); (17) Dr. J. C. Bose; (18) Rai Chuni Lal Bose, Bahadur; (19) Rai Sita Nath Roy, Bahadur; (20) Mr. Surendra Nath Banerji (Principal, Ripon College).

I am directed to forward herewith copies of the papers noted on the margin, and am to say that His Honour the Lieutenant-Governor will be much indebted to you if you will favour him with an expression of your opinion on the proposal for the removal of the Presidency College to a better site in the suburbs of Calcutta.

(1) Extract from the Hon'ble Babu Bhupendra Nath Bose's speech in Council.
(2) His Honour the President's reply to the above.
(3) The Director of Public Instruction's note dated 19th April 1905.
(4) Dr. P. K. Ray's letter dated 16th April 1905.

Extract from the Speech of the Hon'ble Babu Bhupendra Nath Bose *on the occasion of the Budget Discussion for 1905-1906.*

"Sir, I tread on delicate ground when I refer to the expenditure of Rs. 1,00,000 on the Ranchi Model College. I am aware of the difference of opinion which attaches to this scheme. Fears have been entertained in some quarters that the growth of the Ranchi Institution may choke the life of the Presidency College, which has been endeared to us by its long and varied associations. It carries us back to the days of the old Hindu College, to times when the Western scholar had to establish his claims against the ancient forms of the East; it has given us Educationists whose names are remembered with affection and pleasure; it has given us men whom we have learnt to look upon with pride. It serves as an exemplar to educational institutions all over the Province, and it is the centre of our hopes and aspirations. Any action which threatens to undermine its foundations are viewed with dismay. We have Your Honour's assurance that it is not intended to let the Presidency College die. Your Honour will pardon those of my countrymen who fear that Your Honour's successors may disregard your assurance, and that a day may come when the Presidency College may cease to be.

"They point out, not without reason, that solemn pledges contained in Parliamentary Statutes and Royal Proclamations have not always been fulfilled: that assurances made to the ear have been broken to the hope; and that a succeeding Government may feel no compunction in upsetting the decision of its predecessor. I for my part do not share these fears. Whatever may be the fortunes of the Ranchi College,—whatever the intentions of any future Rulers of Bengal,—it is not possible to conceive that the seat of the foremost University in British India,—the seat of the Supreme and Provincial Governments,—the seat of the highest Courts and the principal public offices,—the centre of all educational activity,—should be without an exemplary educational institution in the country.

"To the people in the mufassal, Calcutta with its congested population, its outbreaks of epidemic diseases, its dangerous attractions and its general expensiveness, it is no easy matter to send boys to be educated in the Presidency College. To parents in Calcutta when a boy is sickening in the close and pestilential atmosphere of the town, it is difficult to find where to send him to without a break in his studies. The Ranchi College will not supplant the Presidency College, just as Darjeeling, nay, even Simla, has not supplanted Calcutta, but it will supply a long-felt want. In its hostels grouped together will live the Hindu and the

Mussulman, the patrician and the plebian; and in the warm days of youth they will contract friendships which will bind them as citizens and will be no mean factors in the evolution of India.

"Sir, whatever may be said of the Ranchi College Scheme, I think public opinion will unanimously support me in my prayer to strengthen the Presidency College and widen its sphere of usefulness. It has to maintain its position against powerful Missionary Colleges and active private institutions. No expense will be grudged by the country in giving the Presidency College the most efficient staff. As an old student of the College, I remember with pleasure and pride the days when we sat at the feet of men like Sutcliffe and Woodrow, Croft and Tawney, Elliott and Pedler . . . . . Their sympathy with the students is still remembered with affection, their influence still permeates our life. Nor is this all. If the Presidency College is to fulfil its destiny, it must be converted into a residential College with large and healthy hostels and extensive recreation grounds, where the teacher and the taught may meet untrammelled by the formalities of the class room. Your Honour's sympathy with the cause of higher education is well known. Surely, Calcutta and all Bengal may expect what Your Honour has given to Dacca, and a resuscitated Presidency College with its unrivalled laboratories and library, surrounded by neat and nice-looking quarters for the students and the Professors, overlooking a broad playground, skirting it may be the river or the canal, will be an institution which will worthily commemorate Your Honour's rule."

Extract from Lieutenant-Governor's Speech in the Budget Debate.

"As to the suggestions made regarding the Presidency College, I shall see that they receive early and careful consideration from the Educational authorities. That very considerable improvement is required in regard to the important matters of accommodation for the students and bringing them more into contact with their Professors, I have no doubt whatever; and I shall be very glad to consider, in consultation with my official advisers and with others interested in higher education, the steps which should be taken to secure such improvement."

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His Honour's note dated the 13th April was received by me on the afternoon of Saturday, 15th April, and as I am leaving for England on Thursday, 20th, there is little time for me to give a very complete reply to the questions raised, or to discuss all the problems which are connected with the case.

I have asked the Department of Public Works to kindly supply the maps and figures required in His Honour's note, paragraph 2 (*a*) and paragraph 3, and hope to get them in time to forward with this note.

The remarks in the speech of the Hon'ble Babu Bhupendra Nath Bose in the recent Budget Debate in the Bengal Council on the subject of a remodelled Presidency College, together with His Honour's remarks in reply, raise a question on which to a large extent the future of high education in Bengal will depend, and which must be dealt with in a large and liberal spirit.

The question must be looked upon not as one dealing only with the Presidency College itself or even with Bengal alone. The Presidency College had been for many years far ahead of all other Colleges in India as regards the staff maintained and its appliances for a high standard of teaching. It had always been looked on as not only a model College in Bengal, but a model College in India. It also always has been what may be called a day or non-residential College. On account of its situation, in one of the most densely populated parts of Calcutta, with very little room for expansion, this feature of the Presidency College has been almost unavoidable. But there is no doubt that this has had an unfortunate effect on the character and type of high education which has hitherto been current in Bengal.

During recent years however great efforts have been made, and with considerable success, in other Provinces, to raise the standard of high education with its corresponding teaching.

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In the Presidency College in Madras, for instance, the staff is now excellent; the College buildings are very fine. The College has a very fine Biological Laboratory, by far the best in India, together with good Physical Science Laboratories, distinctly better than those in the Presidency College, Calcutta, and a fairly good Chemical Laboratory, which is however not so good as that in Calcutta.

In the United Provinces, at the Muir College, which is a very fine new building, the laboratories for Physical Science and Chemistry are now better than those of Calcutta, and the teaching staff both in Madras and Allahabad is fairly strong.

The Punjab Government College at Lahore is a fine building. The teaching appliances in it are being improved rapidly, though still behind Calcutta, Madras, and Allahabad. In Bombay the Elphinstone College has a good building, but the less said about the teaching appliances for Science the better. Rapid progress is however the order of the day in India, and with new Regulations under the Indian Universities Act of 1904, a raising of the standard still further will be required.

It will be well perhaps to place on record just a few points with reference to the history of the Presidency College, Calcutta, in its present form.

The existing building (less the extension for the Chemical Laboratory) was erected about 1873, and was opened by Sir George Campbell (then Lieutenant-Governor) either in 1873 or early in 1874. It was a collection of empty halls and rooms of various sizes, the rooms being in no way designed for any special purposes in teaching. No such arrangements as separate Laboratories and Lecture rooms for teaching various subjects in Science such as Physics and Chemistry had been thought of.

At that time also the number of students in the College classes was about a half of what it is now. The figures of the students in the Presidency College in 1873 appear to be about 385. There are now about 764* students attending the College.

My appointment as Professor of Chemistry in the Presidency College dates from May 1873. I was at first given two or three rooms in a house on the opposite side of College Street as a Chemical Laboratory. Later on I was allowed to use the disused Hare School which I had fitted up. The Professor of Physical Science was accommodated in two or three large rooms in the basement of the new Presidency College, which had in no way been designed for Science work. Later on, other rooms on the first floor of the College were taken for lecture rooms in Physical Science. As the Chemical Department grew, I was allowed to design an addition to one of the wings of the College building as a Chemical Laboratory. This was erected (I think) fifteen years ago, and was a vast improvement. When the Chemical section went into its new building, the Physical Science section took in the old Hare School building for certain necessary extensions, so that the Physics Department is now accommodated in no fewer than three parts of the College, all separate from one another.

In addition Geological classes had to be started in a tentative form in the Presidency College some years ago, and a couple of ordinary rooms had to be given up for that purpose.

Still more recently Biological classes have been started, and this Department has also been given a couple of rooms quite unsuited for the work.

Both the Geological and Biological rooms have had of course to be fitted up as best could be done.

Then in addition to the B.A. Science classes in the College it has been necessary to open and provide for classes for the B.Sc. Degree. Astronomical classes and observatories have also had to be provided.

During recent years, too, a considerable number of research students have been deputed to work in the College.

Most recently of all, Commercial classes have been added on to the curriculum of the Presidency College, which will, when the recognised scheme comes into existence, make large additional demands on the accommodation available.

Now the complaint has been coming for the last few years that owing to the large increase in the number of students attending the College, and to the great number of different subjects which have to be taught in any system of modern education, that the College is far too small and too cramped for its requirements.

In addition to complaints concerning the unsuitableness of many of the adaptations as detailed above, each Professor says he requires more space for the teaching of his own science.

It is also beginning to be felt that the College staff, though relatively to other Colleges a very large and a very strong one, is still not equal to the work which should be required to be carried on in the model College of India.

There are also complaints about the discipline of the students out of College hours. It is true we have a large Hostel (the Eden Hostel) for the College, but this is not enough. It holds say 280 students, but it is situated in a bad quarter of the town, and undoubtedly the conditions of residence of the students both in and out of the Hostel (and in messes) might be very greatly improved.

I made some enquiries into the requirements of the Presidency College some three or four years ago, but could do nothing, as there were no financial resources available for extensive additions. One of the objects, however, that I have steadily kept in view has been the urgent necessity of keeping up the prestige of the Presidency College, and before my retirement to try to arrange for it to occupy fully the position which should be assigned to it. Certain plans for the extension of laboratories and teaching appliances have been submitted during the last three or four years by individual Professors, but I postponed them, first till the discussion about the Ranchi College scheme had taken definite shape, and then till I could get a comprehensive and well digested scheme.

Some months ago, I asked the Principal of the Presidency College to consult his Professors, and specially the Science Professors; and to submit a complete scheme of what was required to place the College on a really satisfactory basis.

Again too at my official inspection of the Presidency College about six weeks ago, I made some inspection remarks on the subject of the Presidency College being kept up to the mark, and the necessity for it to fulfil the place assigned to it of being a model College for Bengal at all events, if not for the whole of India.

During my inspection also I discussed the question of possible extension with the Officiating Principal, Dr. P. K. Ray, and with some of the Professors. The result of this is that a certain scheme has been submitted to me by the Principal, which I append to this letter in original, with the plans referred to in the Principal's letter.

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* Figures for 1904.

In the discussions which have taken place it is clear that the view is strongly held that it is necessary that the Presidency College should be improved or perhaps remodelled, and that this is so is perhaps not to be wondered at, for what was good enough and large enough 32 years ago is certainly not to be expected to fulfil the wants of education in Bengal at the present time.

We have also to remember that the Calcutta University may under its new Regulations require not only improvements in buildings and teaching appliances, but may also require Colleges to be more of a residential type than formerly.

There appear to be several possible directions in which action may be taken to improve the Presidency College :—

A.—Land might be taken up in the neighbourhood to allow—

(1) for the necessary extension and development of the College, and for building two or three new and self-contained Science Laboratories ;

(2) to build a house for the Principal ;

(3) to build houses for some or all of the Professors, both European and Indian ;

(4) to increase the hostel accommodation and to bring the hostels under more strict supervision ;

(5) to provide play grounds.

The cost of *A* would probably be prohibitive.

B—.The plan might be limited to (1) of *A* only, and other things left as they are. The cost of this would be much smaller.

C.—*B* might be done, and the hostel arrangements might be made at some place outside Calcutta, the students coming to and from the College by tram. If *C* were carried out it would be well to construct a house for the Principal and some of the staff near the hostel or hostels for the purpose of supervision.

If *C* were carried out also, the Eden Hostel might be made over to the Medical College authorities, for I have learned in correspondence with the Principal, Medical College, and the Inspector-General of Civil Hospitals, Bengal, that such a hostel is rather urgently required for that College.

There are of course a good many arguments in favour of this course, but the plan is open to the objection that not only the staff would, as at present, reside far from the College, but that the students would be also removed from close proximity to their place of work.

D.—Another scheme would be to build any necessary extensions of Science Laboratories at some distance from the existing Presidency College, and for the students to come backwards and forwards from one set of lectures to another. This has been suggested, but I could not possibly recommend the scheme in the form in which it has been put forward.

If it had been proposed to have purely an Arts College in one place, and purely a Science College in another, it might possibly have been discussed.

E.—The best possible course would be to remove the Presidency College and its hostels, etc., bodily to some open place in the outskirts of Calcutta, and to start a new and improved College there, making it as far as possible of a residential type, and with its own recreation grounds attached. This is the scheme put forward by Dr. P. K. Ray in the letter which I forward.

Possibly if *E* were considered, the existing Presidency College buildings might be of use to the Calcutta University for (1) ordinary examination purposes ; (2) laboratories for research, and for the practical examinations in science ; (3) a Calcutta University Library, and (4) an institution in connexion with the Calcutta University, like the existing Calcutta University Institute, but on a much larger scale.

Again also, if *E* were carried out, the Eden Hostel would be found of the greatest possible use to the Medical College, as enabling them to secure a convenient residence for their students close to the Hospital.

These questions will however have to be approached with great care and caution, for it will not do to allow the Indian public to think there is any intention to harm the College or to remove it from Calcutta.

If E were adopted there is much to be said in favour of such a site as is proposed by Dr. P. K. Ray. Another exceptional site might be Kidderpore House, if it is ever given up by its present occupants, for it is now Government property. There are also excellent sites in such places as Ballygunge, Tollygunge, and on Diamond Harbour Road, etc., all of which will shortly be brought within easy reach of the tramway.

As suggested by His Honour the best plan would be to have the case considered by a small committee. As names for such a committee, I would suggest Sir Guru Das Banerjea, Hon'ble Babu Bhupendra Nath Bose, Justice Sarada Charan Mittra, Justice Ashutosh Mukherjea, Mr. K. G. Gupta, the Commissioner of the Presidency Division, Babu Nalin Bihari Sarkar, Maulvi Siraj-ul-Islam, Dr. P. K. Ray, Dr. E. D. Ross, Mr. Küchler, Mr. Prothero, Mr. Cunningham, and Director of Public Instruction, with Mr. V. H. Jackson as Secretary.

If His Honour would preside at the Conference, it would be most popular, and add largely to its weight and influence.

I enclose Dr. P. K. Ray's letter and enclosures in original.

These and those notes will, I suppose, be printed. If so, I should be greatly obliged by six or eight spare copies being sent to me. The return of the original enclosures to Dr. Ray's letter is requested.

The 19th April 1905.

A. PEDLER.

No. 450, dated Calcutta, the 16th April 1905.

From—P. K. RAY, Esq., D. Sc., Offg. Principal, Presidency College, Calcutta,
To—The Director of Public Instruction, Bengal.

I HAVE the honour to forward, in original, the suggestions I have received about the requirements of this College from the members of the Instructive Staff in response to my memorandum forwarding copy of your remarks on the occasion of your last visit and inviting them to make suggestions.

2. It will be seen that these suggestions refer to three main subjects :—

(1) The removal of the College to a better site where it may be converted into a Residential College as required by the University Act ;
(2) The extension of the present Physical and Chemical Laboratories and the building of new laboratories for Biology and Geology, etc., etc., and
(3) The general organization of the College and the enlargement of the teaching staff. I will take these subjects in order.

I.—Removal of the College to a better site.

3. On the occasion of your last visit I spoke to you of the possibilities of extension of the College on the present site and showed you the lands to the west of it. I annex a plan of the site showing the plots that may be acquired and the *pucka* buildings, etc., that stand on them. You suggested that for the purposes of the College, that is for the extension of the Physical and Chemical Laboratories and the construction of new laboratories in Biology and Geology and for a separate hall for a common room, for a gymnasium and for the residences of the Principal and two Professors of the College, the plot marked by the red line A, B, C, D, E, as shown on the plan, and containing about 15 bighas and 3 cottahs, would be sufficient. This would leave no space for the residences of other Professors or for the extension of hostel accommodation for students or for the Superintendent or Assistant Superintendent of the Hostel. For this purpose I suggested that the plot marked by the red line, E, D, F, G, as shown on the plan and containing 3 bighas should also be acquired. This plot is close to our Hostel, on the opposite side of the road to the north, and is a very bad *bustee* at present. The total cost of acquiring both the plots would be about six lakhs. Even if both the plots were acquired, the College would not be residential. There is no possibility of ever having a residential College on the present site. The College has at present no play grounds. It is impossible to have them on the present site. It must be admitted that adequate play and recreation grounds are absolutely necessary for a College in order that the students may be kept occupied in the afternoon and thus acquire a love for health and strength along with their love of study and knowledge,—in order, in short, that the evil effects of excessive mental exercise may be counteracted by corresponding physical exercise. It is therefore desirable to pause and reflect whether the College should be extended on its present site or removed to a better site in the suburbs, where in the near future there might be constructed a residential College with extensive play and recreation grounds as required by the University Act.

4. This question was considered by the Instructive Staff at one of their recent meetings, and the following resolution was adopted by them :—

"That this meeting recognising that the present situation of the College is incompatible with the terms of the University Act with respect to a residential College desires to urge on Government the necessity of removing the Hostel and College to a better site in the suburbs of Calcutta."

5. I beg to submit my suggestions for giving effect to this resolution.

A site may be easily acquired of about three hundred bighas in the northern suburbs at a distance of only three miles from the College. It is bounded on the south by a public road which runs to the east and is known as Dum-Dum Road, and which runs to the west to the river and is known as the Gun Foundry Road. To the north we may go as far as we care, and the same remark applies to the east. On the western side the site is bounded by the broad Cossipore Road. A plan of the site is annexed hereto which will show its situation and surroundings. The site consists mainly of old garden lands, and there are very few *pucka* buildings on it. As the river is not far, as the northern part of Calcutta where reside the gentry whose sons attend lectures at the Presidency College is only two miles or less, as the grounds are high and extensive and capable of great extension, where it is not improbable the private Colleges might migrate in future, moreover as it is proposed to extend the tram line close to it and take the line by its southern and western boundaries, the site selected seems to be admirably suited for the location of the "Premier College" of Bengal.

6. The cost of acquiring this extensive site would not, I believe, be more than that of acquiring the 18 bighas on the present site of the College.

7. At a rough estimate the site and buildings would cost about 25 lakhs. Of this amount 10 to 12 lakhs might be obtained by selling off the present site and buildings of the College either to the University or to private buyers. The remaining 15 lakhs might be advanced by Government in two or three years. The estimated cost is shown below :—

	Lakhs.
Cost of site	6
College Buildings	6
Physical Laboratory	2
Chemical Laboratory	2
Biological Laboratory	1
Geological Laboratory	1
Astronomical Observatory	1
Hall for common room, etc.	1
Gymnasium and out-offices	1
Clearing, levelling, draining, laying out grounds, etc.	1
Residences of Professors	3
Total ...	25

As regards hostels for students on the new site, I believe the proceeds from the sale of the present buildings and site of the Eden Hindu Hostel would be sufficient to construct new buildings on improved plans. The present site and buildings might be sold either to private parties or reserved by Government for the students of the Medical College for whom I understand hostel accommodation is needed, and their estimated value might be credited to the new Presidency College.

II.—Extension of the Physical and Chemical Laboratories and the building of new Laboratories in Biology and Geology, etc., etc.

8. On this subject I would refer to the original letters and notes of the Professors appended to this letter (see notes by Mr. Küchler, Mr. Cunningham, Mr. Mahalanabis, Mr. Hayden and Dr. Cullis). They suggest that each laboratory should be located in a separate building, as in Germany.

In Germany and America and also in England, a Psychological Laboratory has become almost as common as a Physical or Chemical Laboratory. It would be desirable therefore to make provision for it in the proposed new College.

9. A separate hall which may be used as a common room by students and Professors and which may be converted into a large Lecture Room or a Theatre whenever required is a matter of necessity for social intercourse between students and Professors outside college classes.

10. A large gymnasium in the German fashion is absolutely necessary. It should be equipped with all the latest implements of physical exercise as well as provided with the old instruments, such as were once prevalent in India.

11. The grounds should be well laid out for walks as well as for games and sports.

12. On the occasion of your last visit you have been pleased to remark :—

"The College has a very high reputation to maintain. There are over 140 scholarship-holders of various degrees working and reading in the College, so that it contains the cream of those under education in Bengal, and all concerned must realise this and work at the highest possible pressure. It is well to remember that the standard set in all matters in the Presidency College will react generally on collegiate education in Bengal. Great responsibility therefore rests not only on the Principal but also on every professor and teacher in the College, and work of each should be such as will set a proper standard in his own special subject."

13. In order to realise the ideal indicated in the above lines and to raise the College to the level of one in Europe or America it would be necessary to enlarge the teaching staff and to organize the College in such a way as would call forth the greatest individual and collective effort and promote the highest corporate and individual life.

14. On the third subject, namely the general organization of the College and the enlargement of the teaching staff, a separate communication will be submitted in continuation of this.

Enclosure (c) to note by Mr. Pedler, dated 19th April 1905, on proposed removal of Presidency College to the Suburbs of Calcutta.

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I.

Copy of the Director of Public Instruction's remarks.

"I paid a visit of inspection to the Presidency College on this day, and spent a long time in discussing with the Principal and some of the Professors the needs of the College. Official representations will be made on some of the more urgent requirements.

"The College is developing in many directions, and is indeed now too small for its work; but every effort must be made to utilize its present facilities to the utmost. The development of the practical side of the teaching must also always be kept very prominently in view.

"The College has a very high reputation to maintain. There are over 140 scholarship-holders of various degrees working and reading in the College, so that it contains the cream of those under education in Bengal, and all concerned must realize this and work at the highest possible pressure. It is well to remember that the standard set in all matters in the Presidency College will react generally on collegiate education in Bengal. Great responsibility, therefore, rests not only on the Principal, but also on every Professor and teacher in the College, and the work of each should be such as will set a proper standard in his own special subject.

"The College is on the whole doing excellent work, and I was pleased with my visit, though there are directions in which improvement is possible."

ALEX. PEDLER.

The 14th March 1905.

FORWARDED to the members of the Instructive Staff for information.

The undersigned will be glad to receive suggestions from the Instructive Staff about the requirements of the College on or before the 22nd March 1905.

P. K. RAY,

Offg. Principal, Presidency College.

MEMO.

MR. KÜCHLER'S note with plans is circulated to the Professors of Mathematics, Physics, Chemistry, Biology and Geology, for any suggestions they may like to make.

I submitted it to the Director of Public Instruction yesterday. He seemed to be inclined to the view that land should be acquired to the west of the College for the building of the laboratories, etc., etc.

PRESIDENCY COLLEGE, P. K. RAY.

Calcutta, the 15th March 1905.

Note on a new Physical Loboratory for the Presidency College.

I HAVE here drawn up a scheme for a new Physical Laboratory for the Presidency College, in accordance with the general principles which I put forward in my letter of 30th June 1904, to the Principal of the College. The plan which I have roughly sketched, represents the minimum requirements, which the Physical Laboratory of the leading College in Bengal should fulfil, and shows that even with this limitation it will be necessary to utilise the whole of the space which can be gained by the maximum extension of the College buildings in their present grounds, if simultaneous provision is to be made for a moderate extension of the other departments of the College. Should these requirements increase, as they undoubtedly will in the future, it may become necessary to acquire land adjoining the College grounds for further extensions.

Under these circumstances, it seems desirable that the question of the location of the Presidency College with its connected hostels and scientific institutes should be definitely decided before schemes, not only expensive in themselves, but likely to lead in the future to the necessary acquisition of very expensive land, are sanctioned and carried out. It has of course been settled that the Presidency College shall remain in Calcutta, but it does not necessarily follow, I presume, that the whole or part of it should not be removed from its

present cramped situation to some other site, in the suburbs of Calcutta, which would be free from the hampering restrictions connected with the present site, and would admit of the various Scientific Laboratories being designed strictly according to their several requirements. There are various alternatives which suggest themselves in this connection. Either the hostels might be removed to the suburbs, which would not only be an admirable thing in itself, but would leave a large amount of room available for other purposes, or what would be still better, the hostels and the science institutes of the College might both be so removed leaving the present buildings for the literary side and for the commercial classes, which latter threaten in the immediate future to show a vigorous expansion and to require an extensive accommodation. The latter alternative may seem to be a counsel of perfection, but it would probably be the most economical plan in the end, if we judge economy by the criterion of the best return for the expenditure incurred, and it would further avoid the difficulty which would arise in connection with the problem of finding accommodation for the Physical Science department while a part of its present abode was being reconstructed. This plan of building new Scientific Laboratories in the suburbs, where land at moderate prices is plentiful, has been followed for some time past in German University towns, and it has this recommendation that while the land has to be acquired and a complete plan of the future buildings with possibilities of extension should be drawn up from the outset, the actual execution of the various parts of the project may be carried out gradually and as funds become available. Nor need the distance between the College or one department of the College and the hostels be regarded as an obstacle with the present excellent means of communication afforded by the electric tramways. Very cheap season tickets would no doubt be issued by the Tramway Company to such students as wished to avail themselves of this method of transit.

If neither of these schemes be considered feasible, it would in my opinion be much better to acquire at once, even though the expense be great, sufficient land to the west of the College to admit of the erection of adequate scientific laboratories and other buildings, such as a common room, etc., which will be presently necessary to make the College complete in every respect.

To sum up, the reconstruction and extension of the buildings on the present grounds of the College according to the plans I have drawn up, though providing for a good Physical Laboratory and giving temporary relief to the congested condition of the other departments, are open to the following objections:—

(*a*) While the reconstruction was being carried on, the physical department would be deprived of a considerable portion of its present accommodation, and its work would be dislocated.

(*b*) The free circulation of air through the College buildings would be considerably interfered with by the practical enclosure of the College quadrangle.

(*c*) The scheme is at best imperfect and admits of no future extension of the Physical Laboratory according to a properly conceived initial plan.

(*d*) Only temporary relief will be afforded to the other departments, and the question of the acquisition of land (yearly increasing in value), in order to meet their urgent needs, will have to be faced in the immediate future.

It would seem therefore that, whatever form the extension of the Presidency College take, acquisition of a considerable amount of land should be the first step. When this is done, a complete scheme for the future complex of buildings should then be drawn up, and should be carried into execution as funds permit. In this way no disturbance of the present work of the College will take place, and the buildings will be free from the patch-work appearance which they will necessarily present if provision be merely made for additions as the latter from time to time become urgently necessary.

With regard to the scheme for a Physical Laboratory (under present conditions) for which I have sketched some rough plans, I have little to add to the letter which I addressed to the Principal of the College in June 1904. I have in these plans followed out the general principles which I suggested in that letter, and I think it will be found that they satisfy the requirements of the various Profesosrs interested as far as circumstances permit. Provision is made for a large general laboratory for F.A., students; for laboratories for the B. Sc. and M.A. classes; for spacious private laboratories for the Professors; and for rooms for advanced work for assistants and research students. All the other requirements of modern laboratories, which my experience in Germany has shown me to be essential, have also as far as possible been met, and special regard has been had in drawing up the plans to the necessity for the admission of abundant light into those rooms, where a good natural light is called for. The plans are of course only drawn up with a view to providing a basis for criticism on the part of the other Professors to whom the papers will be circulated.

G. W. KUCHLER.

PRESIDENCY COLLEGE, CALCUTTA,
The 8th March 1905.

PRESIDENCY COLLEGE,

Calcutta, the 22nd March 1905.

DEAR DR. ROY,

I MAKE a few remarks in reply to your invitation for suggestions about the requirements of the College.

It is needless to reiterate that the College is woefully deficient in the number of its teaching staff and in its class room accommodation. The interests of earnest and competent students are sacrified to those of less competent students, who derive very little benefit from the instruction given. Many of the students are capable of far better work than that which they now do, but as circumstances are, they do not and cannot receive adequate encouragement. This state of affairs can only be remedied, if the teaching staff is largely increased, and the number of students largely diminished by the exclusion of undesirables. For a single man to each Mathematics to a class containing 150 students of very mixed capacities is a mere farce. Instruction in Mathematics (unless the students are all exceptionally keen) can only properly be carried out when the teacher can keep an actual oversight over the work of his students, and give some individual attention to them, and this cannot be done when the number in the class exceeds 30.

I consider that the Mathematical staff of the college ought to be increased by a dozen assistant teachers, who would take the students in small classes and exercise a close control over their work. Such assistants need not be highly paid, but should not be overburdened with work. Many of them might be young M.A.'s who wished to carry on their studies.

Again I consider that there should be in the College an M.A. class in pure mathematics as well as one in mixed mathematics. Both classes could not, however, be taken by the same Professor, unless he were to confine his teaching to M.A. work. At preseut the College admits an F.A. student, however poor his qualifications, but rejects an M.A. student in pure mathematics however good his qualifications may be.

The various parts of a large telescope ordered by Mr. Little have recently been received A new dome will have to be constructed before this telescope can be set up. This I presume will be left over till Mr. Little's return, as I have no knowledge of his plans.

Yours sincerely,

C. E. CULLIS.

PRESIDENCY COLLEGE,

Calcutta, the 22nd March 1905.

DEAR DR. ROY,

PERHAPS you will expect to receive a few remarks from me concerning the astronomical observatory, though it is difficult for me to speak quite candidly, as I do not consider myself competent to criticise Mr. Little's plans.

Mr. Little seems to have entertained the ambitious design of establishing an observatory fitted up for carrying on research work. This of course has involved and will involve very considerable expenditure, and can even then be only imperfectly realised, the cost of complete realization being practically prohibitive. When all the instruments which have already been received are set up, the trouble and cost of maintaining them in proper working order will again be considerable, and will necessitate the continued employment of some subordinate staff at present.

But all this expenditure will be almost thrown away, unless *some specialist in Practical Astronomy is added to the College staff*, whose sole duty it shall be to use the instruments for purposes of research, and to guide and direct the few students who may be attending the observatory with the hope of doing research work. The observatory will inevitably come either to be neglected altogether, or to be a source of expense for which no adequate return is received unless this is done.

If I had been planning an observatory for the College, I should have advocated merely a demonstrating observatory, suited for class-demonstrations, fitted with comparatively simple instruments, easy to manipulate and easy to keep in order, though not particularly precise. A much more complete outfit than that which we now have could then have been procured for a much smaller outlay than that which has been already made, and the instruments would have been more suitable for class-teaching, and could have been used by a larger number of students. Further, if the College were made residential, it would then be possible, though not desirable, to dispense with a specialist in Astronomy on the staff.

An observatory in which work of real practical utility can be done should be an independent institution with a competent staff of its own.

I make these remarks, in order to put you in posseseion of my views, but I recognise that it would be unfair to criticise a scheme which is only in the stage of inspection, even if I considered myself competent to be a critic.

Yours sincerely,

C. E. CULLIS.

PRESIDENCY COLLEGE,
Calcutta, the 3rd April 1905.

DEAR DR. ROY,

In reply to your invitation for an expression of opinion on Mr. Küchler's scheme for a new Physical Laboratory, I beg to make the following remarks:--

1. It appears to me to be quite impracticable for the Physical Laboratory or for all the science buildings to be erected in the suburbs, while the other Lecture-rooms of the College remain where they are.
This would double the disadvantages arising from the non-residential character of the College. Students working at science subjects have also to attend lectures on art subjects; and so much time and energy would be spent in travelling to and from between their homes and the College, and between the College and the science buildings, that they would be unable to attend to their private studies or to social or athletic interests.
I approve of the plan of having a separate building for each branch of science as is customary in Germany, but these buildings should be all in the same immediate neighbourhood and, by preference, all in the same grounds. Most German Universities are situated in quite small towns, and even in the case of those situated in large towns the distances between the various University buildings are small, so that a student can walk from one to another in five minutes or less.

2. I think that it would be unwise to erect the new laboratory in such a manner as to convert the present College buildings into a closed quadrangle. Mr. Küchler's reasons for objecting to that seem to me to be quite sound.
3. The two practicable alternatives appear to be —
   (1) to purchase and build upon more land adjacent to the present site of the College;
   (2) to remove the whole College (and not the science buildings only) to the suburbs.

4. I do not favour the plan of enlarging the present site of the College, or of erecting new buildings near the present site. The site is an extremely undesirable one for both stndents and teachers. A proper healthy corporate life is impossible when the students (and Professors) are obliged either to reside at a distance from the College or in undesirable surroundings. It seems to me almost a matter of certainty that the necessity for changing the position of the College will be recognised before long, and that it would be therefore wasteful extravagance to spend large additional sums on the present site.
5. I am strongly of opinion that the whole College should be transferred to the suburbs and placed in grounds sufficiently extensive for all requisite building, including hostels, Professors' quarters and recreation fields. It is only under such circumstances that students who have no homes in Calcutta can receive a proper physical, moral and social training, whilst those whose homes are in Calcutta would be at little greater disadvantage than at present. If students of promise are encouraged to come to Calcutta (many of them by Government scholarships), it is due to them that the environment in which they are placed should be such as will favour their best development. Under present circumstances I fear that many of them come here more to their hurt than their good.
6. If the College were removed to the suburbs, I should favour the construction of a number of detatched buildings, a physical institute, a chemical institute, an observatory, a library, and so on.

Yours very truly,

C. E. CULLIS.

Dated Calcutta, the 22nd March 1905.

From—BABU SARADA PRASANNA DAS, Professor of Mathematics, Presidency College,

To—The Principal, Presidency College.

WITH reference to your memorandum, inviting suggestions from the Instructive Staff about the requirements of this College, I have the honour to suggest that there should be a fully equipped Astronomical Observatory in connection with the Presidency College. The observatory, as at present equipped, affords very little facilities for carrying on researches in Astronomy. Research scholarships in Astronomy are granted by the Government from time to time, and the holders of these scholarships are attached to the Presidency College, but it is idle to expect them to carry on Astronomical researches of any importance, so long as the existing observatory is not raised to the status of a real Astronomical Observatory, like the one at Madras.

The essential elements of a good observatory are good instruments to observe with, and regular observers to systematically record their observations. No arrangement has as yet

been made for making regular observations and recording them, though it must be gratefully acknowledged that the Government has kindly provided the Presidency College Observatory with some valuable instruments.

There can be no question as to the desirability of having a good Astronominal Observatory in the metropolis of India. The only question that might be raised is whether such an observatory could be more appropriately established elsewhere, *e.g.*, in connection with the Meteorological Observatory. It may, however, be pointed out that the Government has already spent a large sum of money for the Presidency College Observatory, and it would therefore be economic to expand this observatory rather than establish a fresh one. Moreover, the premier College in India, for that is the proud position to which the Presidency College aspires, should afford every facility for the study of Practical Astronomy to its research students.

Dated Calcutta, the 29th March 1905.

From—Babu Sarada Prasanna Das, Professor of Mathematics, Presidency College,

To—The Principal, Presidency College.

With reference to your memorandum calling for suggestions in connection with Mr. Küchler's note, I have the honour to submit that in any scheme of extension or removal of the Presidency College to the suburbs, the question of improving and properly fitting up the Astronomical Observatory of the College should receive due consideration. A great deal of attention has been and is about to be bestowed (of course deservedly) upon the Physical and Chemical Laboratories of this College, with the object of fitting up these laboratories, not only for the purpose of demonstration to students, but also for affording facilities to advanced students (*i.e.*, research scholars) to carry on researches. Astronomy is a very important branch of science, certainly not less important than Physics or Chemistry. It is therefore desirable that this hitherto neglected branch of science should receive its proper share of attention, and that the observatory of the College should be placed on a sound basis so as to serve like the Physical and Chemical Laboratories the double purpose of research and demonstration.

In connection with the question of acquiring land for extending the boundary of the Presidency College, I therefore beg to suggest that provision should be made for a separate building for the Astronomical Observatory and for the quarters of at least one (for the present) Resident Astronomical Observer who would make observations during the night. By way of explanation of the last suggestion, it may be added that it is often necessary to make astronomical observations even at some inconvenient hour of night, and that in good Astronomical Observatories regular observations are made during the whole night by several observers in rotation.

In conclusion, I beg leave to suggest that a small committee, consisting of the Professors of Mathematics and Physics in this College with the Principal as *ex-officio* Chairman, may be appointed to consider and report upon the question of improving the Astronomical Observatory of the Presidency College.

Re · *Mr. Pedler's Inspection Note on the Presidency College.*

I wish to make the following remarks in response to Mr. Pedler's note calling for expressions of opinion from the Professors of the Presidency College, more epsecially in connection with the special requirements of their several departments.

In the first place, with regard to the Physical section, there are one or two alterations or additions which I should like to suggest.

A.—The annual grant for the purchase of scientific instruments.—At present a sum of Rs. 3,000 is annually allotted for the purchase of scientific instruments through the India Office in London, and there is likewise a small special grant of Rs. 500—nominally a research grant—but subject to the same conditions as the former. The total amount of Rs. 3,500 is intended to cover the requirements not only of the lecture-room and students' laboratory, but also of the recently created research scholars. When the latter scholarships were first instituted, no additional Provision was made for the necessarily expensive apparatus required for research in Physical Science. Further, no distinction was recognized between the different characters of the needs of the two classes of students, *i.e.*, ordinary students and research students. For instance promptitude in supplying apparatus for laboratory and class use, though no doubt desirable, is not of paramount importance, while in the case of instruments required for research work it is absolutely necessary. It may happen that the necessity for a particular instrument in connection with a piece of research work may present itself just after the annual indent has been sent in, in which case there will be a delay of about two years before the instrument reaches the Presidency College, as according to present regulations it can only be included in the succeeding annual indent. Under these conditions any serious work of a higher kind in Physics is materially hampered. I would therefore propose—

(1) that the total grant be raised to Rs. 4,000, *i.e.*, by Rs. 500. The additional amount here suggested is not large, but as the laboratory is becoming fairly well

stocked with apparatus for purely educational purposes, the annual demand in this direction may be considered as having to a certain extent diminished, while simultaneously that for instruments of higher class has increased ;

(2) that this grant be divided into two, *i.e.*, Rs. 2,000 for the ordinary wants of the Physical Science section, and Rs 2,000 for instruments required for higher and research work.

The former grant of Rs. 2,000 may remain under the same conditions as before, but the purchase of apparatus, etc., from the latter should be placed under the same favourable regulations as apply in the case of research and other special grants. I am of course of opinion that in the case of the purchase of apparatus for scientific purposes the officer who has the disbursement of the grant should have the power of corresponding with and ordering directly from the instrument manufactures, as only in this way can the delay, which is inevitable when apparatus is obtained from Europe, be so reduced as to cause a minimum of interference with the scientific work for which it is intended. Until this is done, workers in science in India will always be at a serious disadvantage compared with their European competitors. Pending, however, a general order of Government, which will place the purchase of apparatus for purely scientific purposes on an entirely different footing from that of ordinary stores, I would ask for the slight concession indicated above in the matter of the Presidency College grant for the purchase of Physical Sicience apparatus.

B.—Workshops.—The workshop for the carpenter and mechanic is in a very unsatisfactory condition. I have already in a preliminary note drawn attention to the fact that, although the work of the Physical Science section has enormously increased, the services of the carpenter and mechanic, which were formerly exclusively reserved for that section, have now been in part diverted to other departments of the College as well. Besides this, the workshop suffers from being insufficiently supplied with the ordinary machines, such as lathes, etc., which are the necessary part of the equipment of a modern laboratory. I may mention that the Muir College in Allahabad has lately, with the help of the liberal grants assigned for the improvement of its Physical Laboratory, been able to remedy the deficiencies of its own workshops, and to reorganise them on a scale which is far above that shown by the Presidency College at present. I admit that my representations under this heading should have been made earlier. I had, however, always hoped to be able at a very early date to put before Government a complete scheme for a new Physical Science Laboratory in which all details of improvement would have been included ; but although I have drawn up and submitted to the Principal plans for such a laboratory, it now seems doubtful whether any scheme for enlargement of the present accommodation in co-ordination with the other departments of the College can be satisfactorily carried out on the present site, so that pending the decision of Government on this point the consideration of all such schemes must naturally be postponed. Under these circumstances it is undesirable to delay improvements of detail which can be carried out irrespectively of the construction of a new laboratory.

Under this head I would therefore advocate—

1. That the full time of the present carpenter and mechanic be again allotted to the Physical Science section.

2. That the following machines be procured as soon as possible :—

(*a*) Universal Milling Machine No. 1½ from the Cincinnati Milling Machine Company, Cincinnati, Ohio, United States of America, price delivered at new York, £125.

(*b*) Tools for the same, £6.

(*c*) Drilling machine to be obtained locally, Rs. 400.

(*d*) The Universal Cutter and Tool Grinder (Cincinnati Company), £55.

(*e*) A small electric motor to work these machines, to be procured locally, £30 shipping charges, etc., £25.

These machines might be obtained at once, as a skilled native mechanic would have no difficulty in manipulating them, at least to a certain extent, and they would be invaluable in the manufacture of apparatus for the different classes of students. In order, however, to get the maximum value from these machines, it would be necessary to engage for a term of years an English mechanic specially trained in the manufacture of scientific apparatus. Further, in order to turn out the highest kind of work, it would be necessary to add to the machines already enumerated a special high grade lathe. There are several of these in the market ; but as the various scientific workshops at home have in many cases their own particular form of lathe to which the mechanics working there are accustomed, it would be better that if a mechanic is sanctioned, he should be allowed to select the lathe to be used in the Presidency College, and that he should bring it out with him. I would therefore add to the above recommendations.

3. That sanction be obtained for a skilled English mechanic for a term of five years on a salary of Rs. 300—350 a month, with passages paid both ways.

4. An additional lathe completely fitted for the finest class of work, to be selected by the above mechanic, price about £120.

5. That in the meantime an additional mechanic on Rs. 30—40 be entertained.

I have made enquiries at the local workshops, such as that attached to the Telegraph Department, with regard to the salary which it would be necessary to pay a man with the qualifications indicated in (3), and I find that Rs. 300 a month is the least that should be offered.

The chief objects in employing a skilled European mechanic would be to put the workshop on a proper basis and to set it going, as well as to train native mechanics in the complete manipulation of these machines and the execution of the class of work which can be produced from them, not only for the Presidency College, but also for the other Government Colleges in Bengal, which would in the course of time require workshops of their own provided with machines of the same kind, even if not so liberally as the Presidency College. The services of this mechanic would also be of the greatest value in making the fittings for the new laboratory which it will probably be necessary to erect in the immediate future. Great expense would be saved by having these fittings made on the spot, instead of as would otherwise be necessary indenting for them from home. With regard to the workshop itself and its equipment, as well as the provision of skilled labour for carrying it on, little need be said as to their direct utility. If they are considered a necessary adjunct of laboratories in Europe, where manufacturers of scientific instruments abound, how much more must this be the case in India where such manufacturers are non-existent. It should be clearly realised that the class of work, that should be done in a workshop attached to the Physical Science department of the Presidency College, is not and cannot be turned out by any workshop in Calcutta, even by those of a semi-scientific character such as the Telegraphic workshops, the Mathematical Instrument Department, and perhaps the Sibpur Engineering College workshops. With the help of the proposed workshop research work by students and others would be carried on under much more favourable conditions than obtain at present. But apart from these considerations a properly equipped workshop would likewise possess a high educational value. It is desirable that every student of Physical Science should know how the instruments with which he works are made, and also that he should to a certain extent be able to turn his hand to making rough apparatus himself, or at least to repairing instruments when then get out of order. In most laboratories at home students spend a part of their first year in learning to construct elementary apparatus, and such a system would be even more desirable in Bengal, where outside the capital a knowledge of this kind on the part of teachers of Physical Science may be considered as essential if they are not to be seriously handicapped in their work.

With a properly equipped and organised workshop at the Presidency College such a training could be easily imparted. So far for the special requirements of the Physical science section. With regard to the general remarks of the Director of Public Instruction on the position and working of the College, these seem likewise to invite comment, and I may therefore be pardoned if I take the opportunity of briefly calling attention to a question affecting the staff of the Presidency College which is indirectly raised by the inspection note.

In his note, Mr. Pedler has once more emphasized the fact that the Presidency College is the model College in Bengal, and presumably the term model is intended to include not only the material equipment but also the staff. It has indeed been the avowed policy of Government to make the Presidency College a model in every respect, and yet notwithstanding this intention not only have the best men in the Educational Service been offered no inducements to accept the professorships at the Presidency College, but they have not even, as is the case in other services, received any compensation for the increased expense of living in Calcutta. I consider this a grievance with respect to which the Professors of the college are legitimately entitled to make a representation to Government, and I am perhaps in a position to speak more freely on the subject, as enjoying as I do a local allowance as Meteorological Reporter, I am personally not affected thereby.

The above remarks with regard to the Professors apply with even greater force to the Principal of the Presidency College. In addition to the qualifications of high academic standing and distinguished scholarship which are necessarily demanded by his intimate relations to the University, the Principal should also possess a large amount of tact and a great capacity for organisation. In the selection of such an officer the claims of seniority should obviously form a minor consideration, and it is a necessary corollary that the principalship should be a prize appointment in the Educational Service second only in emoluments and position to that of Director. Till within recent years the Principal of the Presidency College was practically *ex-officio* Registrar of the Calcutta University as well, and although this conjunction of offices is hardly a desirable method of increasing the pay of the former, it yet had the effect of materially increasing the attractiveness of the post. Such an arrangement, even if it still existed at the present moment, would no longer be possible in the future, as it is in contemplation to make the registrarship a full-time appointment. Under these circumstances officers selected for the post to whom the work would otherwise be most acceptable, can hardly be blamed if they seek to decline it or accept it under protest. Further, though it may seem a matter of minor importance the mere status of the Principal carries or should carry with it social duties which are in themselves an additional financial burden to the incumbent of the post under present conditions. On all grounds therefore it would seem a matter of justice that the position of the Principal of the Presidency College should be reconsidered, and it does not seem extravagant to ask that his salary should be made equal to, let us say, that of the Principal of the neighbouring Medical College.

There is one other point in connection with the general scheme of college work on which I should like to say a word or two, *i.e.*, the question of the college vacations. A proposal to

increase these vacations by one month has already been mooted, and there is no doubt that the present time when University students in Bengal are being completely reorganised is favourable for bringing the college vacations more into line with those which obtain in similar institutions in Europe. An addition to the vacations of the Presidency College alone might perhaps have been suggested as a compensation to the Professors of that institution for the special disadvantages under which they labour, but it would I think be difficult to withhold this concession from the muffassal colleges as well, and it seems therefore desirable to discuss this question on its own merits. In the first place, an increased vacation need in no way diminish the total amount of lecturing work which is done in the college. At present at least a month and-a-half is wanted in connection with the University examinations, and either by a rearrangement of the times of examination or by the erection or provision of an additional examination hall (which will be carried into effect almost immediately), or by both of these agencies, at least an additional month will be gained for purely College work. Secondly, there is no doubt that, if the system of vacations were framed on a scale more consonant with European ideas, the work of recruiting the Educational Service with first class men would be greatly facilitated, as the paramount consideration with the genuine scholar or student of science in accepting an educational appointment is not so much the pay attached to it as the amount of leisure which he will have for doing original work and for keeping abreast of his subject. Thirdly, the grant of a continuous long vacation of say $3\frac{1}{2}$—4 months would have the desirable effect of reducing the amount of furlough taken by Educational officers, and the consequent continual changes in the College staffs which are especially undesirable in educational work. An increase in the vacation would work automatically in this direction, but there is no reason why, if the concession indicated be granted, the amount of furlough (*i.e.*, six years) now allowed to Educational officers should not be proportionately or more than proportionately reduced. Lastly, I may mention that in Bombay the Colleges are annually closed for two vacations of two months each, and it certainly seems incorrect in principle that more favourable terms should be granted to Educational officers in one Province than in another. In this connection however I would point out that, if the total vacations be increased in Bengal, an endeavour should be made to provide one continuous vacation of at least $3\frac{1}{2}$ months, so as to enable officers to go home and put in, if they so desire, two months of work at a University or other institution.

G. W. KUCHLER.

The 11th April 1906.

Dated Calcutta, the 31st March 1905.

From—J. C. BOSE, ESQ., Professor of Science, Presidency College,
To—The Officiating Principal, Presidency College.

IN 1897, when in response to the deputation of the leading scientific men in England, the Secretary of State for India appoached the India Government regarding the construction of a Research Physical Laboratory for the better carrying out of researches initiated by myself at the Presidency College, I was requested by the Government to submit a scheme for the purpose. This scheme was duly submitted. Last year I was again requested by Principal, Mr. Edwards to send on my scheme for the extension of the Physical Laboratory of the Presidency College. This request I also met fully. On this subject then I have nothing further to say.

PRESIDENCY COLLEGE,
Calcutta, the 3rd April 1905.

DEAR DR. ROY,

I HEREWITH enclose my suggestions for some of the most important improvements necessary in the Presidency College. I have separated them into (1) those dealing with the general organization of the College, and (2) the special requirements of the Chemical Department.

I shall be greatly obliged if you will forward them to the Director of Public Instruction as soon as possible.

Yours sincerely,

J. A. CUNNINGHAM.

Note on the improvement of the Presidency College.

IN response to the Director's remarks, and the appeal for suggestions as to possible improvements in the Presidency College which has been circulated by Dr. P. K. Roy, I would like to call attention to two matters whose general and fundamental importance will, I feel sure, justify their discussion and careful consideration by every one concerned with higher education.

1. The most important office and functions in any College are those of its official head—its "Master" or its "Principal" according to the country we live in. This is perhaps, if possible, most literally and in every sense especially true in India, and particularly true of the Presidency College. By comparison with all other educational effort in Bengal, Government spends a very large sum of money ou the maintenance of the Presidency College and its teaching staff. There is not the least danger of exaggeration when I say that its equipment is far superior to that of every other College in Bengal —and in India too, let us hope.

The inevitable result is that it exerts a quite preponderating influence on the development—and especially on the reformed development—of the University of Calcutta. It is only natural that the Principal of the Presidency College should be looked up to by the Senate for guidance on all matters of University action and policy. It would be a very natural part of his responsibility to give that gnidance and leadership. In this responsibility the Principal of the Presidency College was practically *ex-officio* Registrar of the Calcutta University until a few years ago.

In the newly constituted University with its widening sphere of activity and usefulness it is almost certaiu to be found necessary to have a whole-time Registrar who will be in charge of the University office as at present. But the leadership and controlling influence in all questions of educational policy would still ordinarily and most naturally fall to the share of the Principal of the Presidency College. The Director of Public Instruction has of course many other branches of education to look after, and would probably be glad to have a strong Lieutenant in constant touch with University affairs.

These functions serve to suggest and emphasise what sort of a man he should be, but, apart altogether from them, the Principal is obviously a very important person within the four walls of the Presidency College itself. There is no immediate prospect of the University of Calcutta becoming a complete and directly teaching University. But every one admits that the teaching (in its broadest sense) of the student is the most important function within the scope of a University system. This must, for the present, be deputed as their particular and proper work to the affiliated Colleges. The Presidency College, in virtue of its endowments and its highly specialised teaching staff, may safely claim to attract "the cream of those under education in Bengal." The other Colleges in Calcutta and the mufassal will naturally look up to it as an ideal to struggle towards. The exact form of that ideal system of teaching the best boys by the best Professors will depend in its broad and more striking outlines very largely upon the Principal who organises and co-ordinates all the different departments of a complete University education—including of Course a due attention to athletics and social life and intercourse within the College, community. In order that any such real value may attach to an ideal system and a model College, it must be allowed to have a continuous career and to develop a consistent policy. It therefore seems to me a matter of very great importance that the Principal of the Presidency College should be able to hold office continuously for a number of years, so that he may be able to develop its work consistently along certain definite lines, and not render the College liable to have its lines of progress shifted and its policy fundamentally changed every few months.

The work and responsibility of the Principal will be further increased if we get a complete new College in the suburbs of Calcutta, and his advice will be very important during its construction.

Without entering into any further detail, I think I have said enough to indicate (what was indeed fairly obvious) the very supreme importance and responsibility of the work done by the Principal. It seems to me that it is the duty of Government to recognise this and to make the Principalship of the Presidency College, a prize appointment instead of, as it is at present, practically a penal one.

If this were done, it would follow logically that the Principal should be the very best man that the Educational Service could furnish, in position and authority second only to the Director of Public Instruction.

2. As the Director has pointed out, the education given in each department of the Presidency College should and would naturally be the standard in the subject towards which the teaching in all other Colleges should be encouraged to aspire. If I may say so, without presumption, the Government does already provide the best teachers that are to be found in India. But teaching is essentially a slow matter of gradually leading up the subordinates of a department to a higher standard of work, and gently encouraging students to push ever further and further ahead. It cannot be taken up by one Professor at any accidental point where the previous lecturer may have had to drop it, without serious loss of effectiveness and dissipation of the energy of the students. The more able a body of University teachers is, the more are they liklely to differ individually in the details of their educational methods. It is, therefore, absolutely ruinous to good work to have a change of teachers every few months. And if the change does not actually take place, the possibility of it is always like the sword of Damoclas above our heads. This fear of change is almost as unsettlemg and as destructive of through work as the actual disturbance when it occurs.

I would, therefore, respectfully suggest that a certain security of tenure should be guaranteed to all Professors and teachers at the Presidency College. I may, perhaps, mention that it is the present insecurity and uncertainty that is the chief deterrent to recruiting the Educational Service at home. One begs to have the transferring clause deleted from one's agreement at the India Office, and one is only induced to come out by the assurance that it is "practically" a dead-letter.

I am well aware that there are very great practical difficulties in the way of promising such continuity of work. Even Professors are mortal, and get ill or go on leave. But

I venture to express the belief that if a full four month's continuous vacation (which I understand is up for the favourable consideration of Government) were granted during the most unhealthy season of the year, the chances of serious illness among the Professors (as well as among the students) would be greatly diminished, and I feel sure that the members of the Educational Service would on these conditions gladly resign all claims to short leave (and possibly even to long furlough, though in that case it is comparatively easy to get on a special substitute from home without disturbiug three or four other departments of College work). At Oxford and Cambridge there is six months of vacation, during six or seven week of which the more hard-working students are encouraged to come up again for an extra term. In America too (where they always have an eye to sound business) there is a very long vacation during which students are free to make an honest dollar by healthy open-air work.

The 3rd April 1905. J. A. CUNNINGHAM.

Note on a new Chemical Laboratory for the Presidency College.

IT seems somewhat in the nature of dancing on a dead mouse to abuse the Presidency College in its present site, and I hope that it is no longer necessary. Professor Küchler has made the utmost possible out of the present ground, and his demands for a Physical Laboratory certainly do not err on the side of extravagance; but when we proceed to divide up what is left over of the present compound among the other departments of the College, we find at once that there is not enough to go round. Much of the present building is not at all suitable nor easily adaptable to the special needs of Natural Science.

In trying to adapt the present buildings and space to the requirements of the Chemical Department, the very first difficulty that arises is in finding space for a proper lecture-theatre. The present lecture rooms are hopelessly inadequate to the large classes that we have at the Presidency College, and their acoustic qualities are mainly occupied in resonating to the noises from the closely surrounding streets. This last characteristic is of course inherent in the present situation. The Director of Public Instruction has himself seen how insuperable the former structural difficulty is, and the futility of all suggestions short of acquiring a new site. If that view is finally accepted by Government, there will be no difficulty in drawing up detailed plans for the requirements of the Chemical Department. Their most important features will be—

1. One large lecture-theatre with modern fixtures for complete experimental demonstrations and adjacent preparation room.
2. Two smaller lecture rooms for taking advanced classes in the special branches of their work.
3. A large elementary laboratory.
4. A large laboratory for advanced analytical work with adjuncts, including balance rooms, etc.
5. A laboratory for Physical Chemistry.
6. A room for organic preparations.
7. A room for combustion and for electric furnace.
8. A water analysis room.
9. A gas analysis room.
10. A large experimental dark-room and a spectroscope room.
11. A room for work with radiactive substances.
12. A room for a liquid air machine.
13. A room for working at very low temperatures.
14. Three or four rooms for research students (the number of these rooms required will increase rapidly when we get started on real University work).
15. A private laboratory for each of the Professors.
16. A private room for the Professors.
17. Two rooms for the Demonstrators and Assistants.
18. A museum for chemical specimens.
19. Two or three store rooms.
20. A workshop and glass-blowing room.
21. A battery room (though this might advantageously be amalgamated with that of the Physical Department, if the two departments are adjacent as would be natural).

The present annual grant to the Chemicial Department (Rs. 3,000) is only barely sufficient to meet the cost of the chemicals and apparatus actually consumed in the laboratory by the elementary students. This will naturally increase rapidly with the increased attention to experimental science, and there should obviously be an annual margin over and above this, which could be devoted to the gradual accumulation of apparatus of permanent utility. The research students would require a further allowance for their special requirements, and I think the grant should be made up to Rs. 4,000 at least.

As regards the workshop and glass-blowing room, this is closely connected with the scheme more full detailed by Mr. Küchler in his note. The two main arguments in its favour seem to me to be—

(1) That all European laboratories find it economical to keep a much larger workshop going than is proposed for the Presidency College, though they have many manufacturers of scientific instruments close at hand. And though it will be necessary to give a European foreman instrument-maker more wages in India than at home, yet his native assistants will work much more cheaply than in Europe, and it is hoped that in four or five years it will be possible to train a number of natives of India to do foreman's work both in the Presidency College and in the mufassal Colleges where they are certain soon to be required.

(2) A good workshop in connection with a College Laboratory has very great educational value. Students learn much more about the construction of an apparatus by seeing it made than by merely looking at the outside of the finished article. This educational value acquires further definiteness from the fact that the school and College teachers whom we train at the Presidency College will be much more valuable servants of the State if they are able to make apparatus with their own hands. The value of such a course as a scientific training has long been recognised at the Royal College of Science and elsewhere.

J. A. CUNNINGHAM.

The 3rd April 1905.

Dated Calcutta, the 27th March 1905.

From—S. C. MAHALANOBIS, Esq., Professor of Biology, Presidency College,
To—The Officiating Principal, Presidency College.

PURSUANT to your invitation for suggestion about the requirements of the College, I have the honour to submit my representation as regards the needs of the Biological Department.

"The College is developing in many directions," as the Director of Public Instruction has been pleased to remark; and indeed in no department this is more in evidence than in the Biological Department. The Biology classes were opened in September 1900, with about a half-a-dozen students, I presume, more or less as an experiment. The number of students attending these classes has steadily increased, amounting, at present, to sixty-three. That the experiment has been very successful is proved not merely by the numerical strength of the classes, but more convincingly by the keen interest which the students take in these subjects; and indeed "the eagerness to learn is, in many cases, quite touching." Unfortunately the accommodation and other necessary arrangements fall far short of adequate requirements for maintaining the reputation of the "premier College of Bengal." It has been my constant endeavour to develop the practical side of the teaching as fully as possible, and representations setting forth the needs of the department have, from time to time been submitted.

The question of extending the College building to relieve the present cramped and congested condition has been already raised, and I take this opportunity to point out that the condition of congestion has attained its maximum degree in the Biological Department. The small room (measuring 35′ 6″ × 25′ 6″) at present available, is used as a laboratory preparation room and as well as a practical class room. In this *multum in parvo* of a laboratory only twelve students can be accommodated for practical work; and even at that rate the same working benches have to be used for Practical Physiology, as well as Practical Botany. Under these circummstances, only the B.Sc. students get instructions in Practical Physiology and Practical Botany; whereas a large number of B. A. students (about 50) do not get the opportunity of having a regular course of practical training in these subjects. This is to be greatly regretted, for, without efficient means to give Practical training, all attempts to teach Science are bound to be futile.

Thus, even to meet the immediate needs of the Biological Department to a very moderate degree, the addition of a room measuring 70′ by 26′ fitted as a Practical Class Room is absolutely indispensable.

Judging from the present rate of growth of the Biological classes, I am convinced that within near future the Biological Department will develop into just as important a department as that of Chemistry or Physics. We cannot lose sight of the fact that a reformed University is fast coming on us, and under the new order of things, it is presumed, the students of Biology in the more advanced stages will not be fettered by the compulsory subject of Mathematics. Besides, as Physiology and Botany are going to be introduced in the course of study for Matriculation Examination, there will be a growing demand in schools for men qualified to teach these subjects. Such teachers will, presumably, be recruited from among the graduates in Science who profess Biology. In view of these changes calculated to place Biology on a broader basis, it is incumbent on us to see that the most recent and approved methods of practical training in these branches of science are introduced in the Presidency College.

If we are to have anything like a modern Biological Laboratory worthy of the Presidency College, we must have sufficient accommodation for two lecture-rooms, a preparation room, a practical class room, a research and advanced students' laboratary, a room for optical work, a Galvanometer room, a Professor's room and a Museum. A detailed plan of these requirements will be submitted when the question of the College building has been decided upon.

Then, Sir, I hold it nothing short of folly on the part of a Professor of Science to expect to be abreast of the times and to be able to inspire his students with new ideas, unless he keeps himself cognisant of recent advances in science, and devotes a good deal of his time to research work. It is also highly desirable that the more advanced students should receive an introduction to, and an adequate training in, methods of active enquiry which it will be their duty and glory to develop throughout later life. This necessarily involves in addition to the existing teaching staff of the College. At present the Professor of Biology having two different and very comprehensive subjects (viz., Physiology and Botany) to teach, can hardly find time even to do justice to either of these courses of study. I may add here that no other University recognises courses of lectures on these two subjects when given by one Professor. Then at present there is no provision in the Presidency College for the teaching of Zoology. Under these circumstances an addition to the present staff of teachers is essential.

I beg to suggest that two lecturers (one of Botany and the other in Zoology) be appointed, who will give courses of lectures on their respective subjects—somewhat on the plan adopted by the Calcutta Medical College. The Professor of Biology will lecture on Physiology, and being a whole-time teacher will be in charge of the practical classes, the research work and the laboratories. In conducting the practical classes, the Professor will be assisted by two Demonstrators.

In conclusion, I beg again to draw your attention to the fact that the present arrangements are quite inadequate to meet the requirements of the Biological Department, and I respectfully urge the necessity of taking steps in the directions indicated above.

Datea Calcutta, the 21st March 1905.

From—H. H. HAYDEN, Esq., Lecturer on Geology, Presidency College,
To—The Principal, Presidency College.

WITH reference to the copy of the remarks of the Director of Public Instruction forwarded by you, and to your endorsement on the above, I have the honour to suggest that the Geological Lecture-room and Laboratory at the Presidency College be fitted with electric fans and lights.

Dated Calcutta, the 30th March 1905.

From—BABU RAJENDRA LAL SINGHA, Gymnastic Instructor, Presidency College,
To—The Principal, Presidency College

I HAVE the honour to submit the following suggestions for the improvement of the Gymnastic class in connection with the Presidency College, and hope you will be kind enough to consider them favourably:—

1st.—That annual prizes and certificates be awarded to the best three or four students from each class, and that special prizes be awarded for regular attendance in the Gymnastic class.

2ndly.—That as the present site of the College Gymnasium is not quite open and well ventilated, I should suggest that another set of apparatus be fixed in the hostel compound, and that the same be covered by a corrugated roof in order that the class might be held regularly even in the rainy season. A weighing machine and a measuring instrument should be ordered for the Gymnastic class. The weight and measurements of each student might then be recorded regularly in a book every six months or quarterly. It would certainly be a great incentive to the students to find that they have gained an inch in the girth of their chest or in the circumference of their upper arms by taking a regular course of exercises.

3rdly.—That the students of the first and third year classes be compelled to attend the Gymnastic class at least fifty per cent. of the working days.

4thly.—That a grant of at least Rs. 300 be made annually for the general improvement of the class and for awarding prizes in Gymnastics and Indian Club exercises, etc. If this may not be available at present from the Government, I should suggest that the same be paid out of the Athletic funds of the College.

Dated Calcutta, the 22nd March 1905.

From—G. W. KÜCHLER, Esq., Professor of Physics, Presidency College,
To—The Principal, Presidency College, Calcutta.

IN accordance with your memorandum inviting suggestions about the requirements of the College, I have the honour to submit the following minor suggestions, so far as the Physical Laboratory is concerned.

1. The work for the practical and other classes, both for the ordinary and the research students, has increased so much during the last few years that the mechanic and the carpenter attached to the Physical Department are unable to cope with all the work that they are given to do, thus causing great delay and inconvenience in the carrying out of important work. Moreover, the difficulty is enhanced by the fact that their services are available for the Physical Laboratory only for four days out of six in the week, the remaining two days being required for the College Office and the Chemical Department. I beg to suggest that the mechanic and the carpenter be left entirely for the Physical Laboratory. If necessary a new set (one carpenter and one machanic) be appointed to carry on the work of the other departments.

Dated Calcutta, the 10th March 1905.

From—H. H. HAYDEN, Esq., Lecturer on Geology, Presidency College,
To—The Principal, Presidency College.

IN submitting the annual indent for European stores required in connection with the Geology classes in this College, I have the honour to draw your attention to the inadequacy of the space at present provided for the accommodation of the teaching staff and of the apparatus required for effective instruction.

2. For many years Geology was apparently regarded as a subject of mere academic interest, and one of which a sufficient knowledge could be acquired from text-books to enable students to obtain the number of marks requisite to qualify for a degree. The futility of reducing a science of such great practical value, especially in India, to a mere assemblage of ill-digested facts and theories needs no comment. Mr. Holland, therefore, and those lecturers who have succeeded him, have endeavoured to teach the subject in such a manner as to render it one of practical utility. For this purpose, a collection of diagrams, models, apparatus, geological and palaeontological specimens, was essential, and these not being available in the Presidency College, it was found necessary to employ such materials for practical instruction as were available at the office of the Geological Survey of India, until a suitable collection could be obtained for the Presidency College itself. The inconvenience of such an arrangement, both to Lecturers and students, is self-evident, and could not fail to impair the efficiency of the instruction, by divorcing the theoretical lectures from the practical demonstrations necessary for their satisfactory elucidation, and Mr. Holland, with such materials as he could obtain or prepare, laboriously accumulated a number of diagrams, models and geological specimens, thereby forming the nucleus of the present teaching collection which has been gradually expanded by the efforts of Dr. T. L. Walker, Mr. P. N. Bose and Professor Brühl. This is now in a fair way to become an adequate means of practical instruction and demonstration, without which an intelligent grasp of the subject is unattainable.

3. For this purpose, the Government of Bengal has generously set aside an annual grant of Rs. 2,000, and it should be possible, in the course of a few years, to accumulate a thoroughly equipped teaching collection; a considerable amount of useful material has already been acquired, and further additions, indented for in 1904, should reach Calcutta in the course of the next few months: these additions, although essential to the collection, are nevertheless a cause of some embarrassment, since the one room, at present available for storage of specimens, is already greatly overcrowded and, on receipt of further consignments, it will be difficult to find accommodation even for the cases in which they are packed, much less for their display in such manner as to render them readily accessible to students.

4. I have therefore the honour to urge the necessity of providing further accommodation. After careful consideration, I am of opinion that the *minimum* requirements of the Geological section of the College are as follows:—

(*a*) Lecture-room: of the same size as that at present used for the purpose.
(*b*) Museum of a minimum size equal to twice that of the present geological lecture-room.
(*c*) Optical laboratory; of the size of the present Geological lecture-room for optical work, microscopic petrology, etc.: this might also contain the chemical balances necessary for assays, rock analysis and similar chemical research.
(*d*) Chemical laboratory (for rock analysis and research work); of a minimum size equal to that of the present Geological lecture-room.
(*e*) Office for the demonstrator: a small room would suffice.
(*f*) Godown for storing spare chemical and other apparatus.
(*g*) Godown or other enclosed space, in the neighbourhood of the Geological laboratory, in which the section-cutter may prepare sections of rocks for the microscope: the nature of this work renders it impossible for it to be carried on in rooms devoted to other purposes, but only a small amount of space is necessary.

These I regard as the minimum requirements, but should it be possible, I would recommend that a small dark room be added for micro-photography, as well as a furnace for the teaching of Practical Assaying.

5. In submitting the above list, it is perhaps desirable to explain the exact purposes for which certain of the rooms are required. Thus the Museum would contain glass-topped cases, in which would be displayed collections of typical minerals, rocks and fossils : a considerable number of these have already been acquired, and further additions are desirable as soon as space is available for their display. It is essential that such specimens should be at all times readily accessible to the students, who should be encouraged to handle them freely and thus to familiarise themselves with all the more important types: at the same time, it would be necessary to display a representative collection of such minerals, rocks and fossils as are found in India. For this purpose, at least twice the amount of space at present available is urgently required.

The Chemical Laboratory would be devoted to quantitative and qualitative analysis of rocks and minerals, and should be equipped chiefly with a view to its employment in this respect. Work of this nature cannot now be carried on at the Presidency College, as I am informed that the existing Chemical Laboratory is alrerdy overcrowded, and for this reason it has been customary for the Lecturer, with the sanction of the Director of the Geological Survey, to give practical instructions to the more advanced students at the laboratory attached to that department. Owing, however, to the small size of that laboratory, and also to a great increase in chemical work, such an arrangement will, in future, be impossible, and it is therefore a matter of urgent necessity that a suitable laboratory should be provided at the Presidency College.

The Optical Laboratory would be employed for microscopic and all optical work connected with Mineralogy and Petrology, and might at the same time contain the chemical balances.

6. In connection with the question of practical instruction in Geology and Mineralogy, I have the honour further to draw your attention to the fact that in the year 1903 a Demonstrator in Geology was appointed, as a temporary measure, to assist the Lecturer: the greater thoroughness and more practical nature of geological training now aimed at render the assistance of a Demonstrator, under existing arrangements, and having due regard to the interests of the student, quite indispensable. At present the appointment of Demonstrator in Geology is combined with that of Lecturer on Physiography; but as I understand that the abolition of the latter post is contemplated, I would recommend the creation of a permanent appointment of Demonstrator in Geology, and would further recommend the present temporary Demonstrator, Babu Hem Chandra Das Gupta, M.A., for the permanent appointment. You are, no doubt, fully acquainted with Babu Hem Chandra Das Gupta's professional qualifications, but I should like to add my testimony to that of my predecessors, Mr. P. N Bose and Professor P. Brühl, as to his zeal and energy. I have found him most useful and assiduous in the performance of his duties as Demonstrator. I consider him eminently suited for the post, and I fully concur in the high opinion of his capabilities formed by Mr. Holland, as recorded in his letter to you, dated the 17th May 1901.

I would further recommend that a pay of at least Rs. 100 per mensem be attached to the appointment. That this amount is not excessive may be readily gauged by the fact that another ex-student of the Presidency College, whose professional qualifications are similar to those of Babu Hem Chandra Das Gupta, is at present obtaining, as a geological expert, a salary five times as high as that which I now suggest.

Dated Calcutta, the 9th February 1904.

Memo. by—A. C. EDWARDS, ESQ., M.A., Principal, Presidency College.

FORWARDED to Mr. G. W. Küchler, Senior Professor of Physics in the Presidency College, for favour of his specific opinion on the proposals for extra accommodation for the laboratories of the college.

2. A true copy of my letter No. 54, dated the 16th January 1904, addressed to the Director on this subject, is also forwarded herewith for his perusal.

3. The return of all these papers is requested, duly signed, when no longer required.

No. 1540, dated Calcutta, the 5th February 1904.

From—The Hon'ble Mr. A. PEDLER, F.R.S., C.I.E., Director of Public Instruction, Bengal,

To—The Principal, Presidency College.

IN returning herewith the papers submitted with your letter No. 54, dated the 16th January 1904, to the address of the office, regarding extra accommodation necessary for the Physical, Chemical and Biological Laboratories of the Presidency College, I have the honour to state that, as Mr. G. W. Küchler, the Senior Professor of Physics, has now returned to the College, it is, in my opinion, desirable to have his specific opinion on the proposals, as, according to the papers, Mr. Küchler does not appear to have been consulted in the matter. In my opinion the matter does not appear to be an urgent one. I have also to draw your attention

to the recommendations of the Indian Universities Commission about the desirability of establishing residental Colleges with residences for students, Principal, and some Professors, and to inform you in this connection that a scheme has recently been mooted to transfer the Presidency College from Calcutta, but it has not yet taken a definite shape. In view of the probability of such changes, proposals for large extensions and additions will have to be dealt with very cautiously.

No. 54, dated Calcutta, the 16th January 1904.

From—A. C. EDWARDS, ESQ., M.A., Principal, Presidency College,
To—The Director of Public Instruction, Bengal.

As I believe you are aware, Mr. Stapleton, Senior Professor of Chemistry in this College, now on deputation, considers that extra accommodation for the Chemical Department of this College is absolutely necessary, and, as I understand, in accordance with your desire, he has had two rough plans prepared, which are herewith submitted along with his letter No. 1, dated the 2nd January 1904, in original, in which he formulates his proposals in connection with the proposed extensions.

In view of the fact that a good deal has already been done (when you yourself were a member of the College staff) towards bringing the Chemical Laboratories of this College more nearly up to the standard of modern requirements, while the Physical Laboratories have practically been left without any improvements at all, I believe you will agree with me in thinking that, in any scheme for providing increased accommodation for the Chemical Laboratories, the requirements of the Physical Department should also be fully taken into account.

The Physical Laboratories and lecture-rooms are at present scattered all over the College building, with the result that great delay and incovenience are caused by instruments and appliances having to be sent about in different directions to the Professors when engaged in their work, not to mention the risk of damage to the more delicate apparatus thereby incurred. Further reasons showing the need of improved accommodation for the Physical Department will be found in a letter from Dr. J. C. Bose, C.I.E., Professor of Physics, herewith enclosed in original. It seems, therefore, most desirable that all the necessary Physical Laboratories and lecture-rooms should be provided in contiguity to one another in one part of the College building.

With this object in view, it is proposed that new laboratories and lecture-rooms should be built on the north-west and north sides of the College premises, the existing covered way on the north-west side and one-storied building on the north side being dismantled, and a complete quadrangle being formed by the erection of new three-storied buildings on those two sides.

A portion of the ground flour on the north-west side would have to be reserved for the extension of the College Library, but with that exception the whole of the new buildings on the north-west side and nearly the whole of the two upper floors of those on the north side would be appropriated to the Physical Department, while on the ground floor of the north side it is proposed to provide a large Chemical and Physical Laboratory for the F. A. classes, capable of holding some 250 students.

Further details of the new accommodation will be found in the two letters from Dr. Bose and Mr. Stapleton, respectively.

It will be seen that Mr. Stapleton's rough plans provide for a one-storied building only on the north side, but to supply the necessary accommodation for the Physical Department, a three-storied building on this side would in my opinion be absolutely necessary. Indeed, if a one-storied building only were required on the north side, the existing building there, or at least part of it, might, I think, be allowed to stand. Mr. Stapleton's plan No. 2 may, I think, be left out of account, as unsuitable. Considering the large intramural compouud, I do not think that a three-storied building on the north side would appreciably affect the temperature of the College class rooms as the prevailing breeze is from the south. Dr. Bose's rough plans are not yet sent in, but I do not think it necessary to wait for them before submitting these papers. The College rooms, now occupied by the Physical Department, would, in the event of the new accommodation being provided, be appropriated to meet the requirements of other departments of the College. A lecture-room and Museum for the Biological classes are urgently needed, as at present it is necessary to use the Biological Laboratory as a lecture-room and also for holding practical classes in. The Lecturer on Geology requires some more rooms for the proper working of his department, while additional accommodation for general College purposes is also desirable.

Before asking the Public Works Department to prepare plans for submission to Government, I have thought it expedient to send you the accompanying papers, in order that you may let me know your views on the subject and the course which you would wish me to take in the matter.

The favour of the return of the rough plans with your reply is solicited.

I may add that, in my opinion, it may be necessary to take up the strip of land marked blue in the rough plan, as a site for the carpenter's shop, etc., connected with the Physical Department.

Dated Calcutta, the 14th January 1904.

From—Dr. J. C. Bose, C.I.E., Professor of Physics, Presidency College,

To—The Principal, Presidency College.

In urging the extension of the Physical Laboratory at the Presidency College, it is perhaps well that I should make some definite reference to various considerations which tend to make such an extension absolutely necessary. And these considerations I shall lay before you under two headings—(*a*) the requirements of the College for teaching purposes, and (*b*) its requirement for the advancement of original research.

2. With regard to the requirements for teaching purposes, I may say that the recently opened B. Sc. classes make increased provision for practical work a matter of immediate necessity. The scientific side of this College has become greatly prominent by the creation of a special Science course, and it is necessary to get the laboratory and its equipment upon an efficient basis, suited to our position as the model College of the Presidency.

3 With the recommendations of the recent Universities Commission for creating new and high standards of education, there ought to be some attempt to represent the ideal proposed in more or less concrete form.

4. A more immediate and pressing consideration is the need for the laboratory and lecture-rooms to be in close contiguity. At present they are scattered over the College, and there is much loss of time in the transport of apparatus from place to place. A large lecture-hall will be a great advantage, in order not to divide classes into seetions as has to be done at present.

5. As regards the advanced research in Science, I need only refer to the fact universally admitted, that the highest function, to which all Universities aspire, is the advancement of the existing sum of human knowledge. The Presidency College has tried to discharge this function, and it is already well known to you that I have been able to carry on investigations on various scientific lines during the last ten years in this College. This has been done under great difficulties arising from the very special requirements as regards the experimental rooms and appliances demanded by the highest kind of research.

6. Many important investigations are, therefore, indefinitely delayed, because of the want of special facilities; and the Government of India was pleased on two separate occasions to send me to Europe on deputation, to enable me to bring some of the investigations to a successful conclusion.

7. With reference to the importance of a well-equipped laboratory for advanced investigation I have been carrying out, Lard Kelvin was pleased to address a letter, dated the 23rd October 1896, to the Secretary of State for India, from which the following is an extract:—

"I believe it will be conductive to the credit of India and scientific education in Calcutta, if a well-equipped physical Laboratory is added to the resourses of the University of Calcutta, in connection with the Professorship held by Dr. Bose."

8. Subsequently (April 12th 1897) some of the most distinguished members of the English scientific world, including the President of the Royal Society, Lord Kelvin and others formed a deputation to present a memorial to the Secretary of State to the same effect (see Appendix A).

9. In a Despatch, dated the 6th of May 1897, to the Governor-General in Council, the Secretary of State was pleased to say: "I am of opinion that the question of establishing an institution of the kind mentioned is deserving of consideration by Your Excellency in Council."

10. What was already necessary in 1897 is much more urgently required now. I have within the last few months commenced new lines of investigations, which is only partially completed, but whose scope and importance will be gathered from the following extracts from letters (dated the 3rd December 1903) addressed to me by Professor S. H. Vines, President of the Linnean Society, who has been kind enough to undertake the communication of these discoveries to the Scientific Societies in Europe:—

"It seems to me clear that you have revolutionised in some respects, and very much extended in others, our knowledge of the response of plants to stimulus and of the electro-motor phenomena associated with the response. These results are important not to botanists only, but to all physiologists. It is a matter of wide biological interest to be able to demonstrate (as you have done) that the phenomena, which are well-known in the case of animal tissues, such as muscle and nerve, are repeated so exactly by the undifferentiated protoplasm of the plant-body. I cannot think but there must be a great deal more to be discovered along the lines that you have opened up, and I hope that you will have at your disposal both time and opportunity to pursue what you have so well begun."

11. I may state I am hoping to solve completely certain most difficult physico-biological problems, which have hitherto baffled inquiry. But, in order to carry this out, greater space and other facilities are absolutely essential.

12. I beg to submit, for favourable consideration of the Government, a rough sketch of the proposed Physical Laboratory for teaching purposes and for advanced research. The detailed plan will be submitted by me after consultation with the Public Works Department.

13. The proposed building is to be three-storied, occupying the north and north-west end of the College, thus forming more or less a quadrangle with the rest of the College building. The north end will have a ground-floor area of about 115 into 45 square feet; the north-west end will have an approximate area of 30 into 45 feet.

14. I may state here that the area we are now occupying for the Physical Department (about 14,000 square feet) will be required for other classes in connection with the College The new building will give us only a slight increase of space, *i.e.*, only about 10 per cent., the new area available being about 15,500 square feet. Larger space would have been preferred had it been available. Much will be gained by bringing in scattered rooms near each other.

GROUND-FLOOR.

In the ground-floor of the proposed building a space is required for the extension of the library, and for a coommon room in Physics and Chemistry. This leaves space for—

(1) Mechanic's workshop.
(2) Carpenter's workshop.
(3) Rooms for dynamo-machine and storage cells.

FIRST-FLOOR.

West and North-West end.

Lecture-hall for advanced students, 38 into 30 feet. Large lecture-hall for elementary students, 70 into 30 feet.

North end.

Four rooms, 40 into 28 feet each—

(1) Optical room.
(2) Dark and photo-electric room.
(3) Galvanometer room.
(4) Room for other apparatus and general experiments.

These rooms are for the advanced researches referred to above will give the minimum space necessary for the particular work.

SECOND-FLOOR.

West and North-West end.

(1) Experiment room, 38 into 30 feet, for general practical work for M.A. students.
(2) Experiment room, 70 into 30 feet, for the B.A. and B. Sc. practical classes.

North end.

Four rooms, 40 into 28 feet each—

(1) and (2) For advanced students doing research work.
(3) Galvanometer room for M.A. students.
(4) Optical room for M.A. students.

No. 4354, dated Calcutta, the 4th August 1897.

Memo. by—C. MARTIN, ESQ., Director of Public Instruction, Bengal.

COPY of endorsement No. 1830, dated the 14th July 1897, from the Government of Bengal, General Department, with enclosures, forwarded to the Principal of the Presidency College for favour of his opinion.

No. 39, dated India Office, London, the 6th May 1897.

From—The Right Hon'ble LORD GEORGE HAMILTON, M.P., Her Majesty's Secretary of State for India,

To—His Excellency the Right Hon'ble the Governor-General of India in Council.

I FORWARD, for the consideration of Your Excellency in Council, a copy of a letter from Mr. C. E. Schwaun, M.P., enclosing a memorial from certain distinguished scientists in this country, advocating the establishment of a Central Laboratory for advanced teaching and research in connection with the Presidency College at Calcutta.

2. I am of opinion that the question of establishing an institution of the kind mentioned is deserving of consideration by Your Excellency in Council, and I shall be glad to be favoured with your views upon the subject.

No. 165, dated Simla, the 26th June 1897.

From—J. P. HEWETT, Esq., C.I.E., Secretary to the Govt. of India, Home Dept.,
To—The Secretary to the Government of Bengal, General Department.

I AM directed to forward a copy of a Despatch and enclosures from the Secretary of State for India, transmitting a memorial from certain distinguished scientists in England, advocating the establishment of a Central Laboratory for advanced teaching and research in connection with the Presidency College at Calcutta, and to request that the Government of India may be furnished with an expression of the opinion of His Honour the Lieutenant-Governor on the proposal.

Dated House of Commons, London, the 12th April 1897.

From—The Right Hon'ble CHARLES E. SCHWAUN, M.P.,
To—Her Majesty's Secretary of State for India.

I HAVE been requested by Sir Henry Roscoe, on behalf of his co-signatories to the enclosed memorial, to hand it over to you personally, and to recommend it to your earnest and favourable attention. It is hoped that you will have the goodness to forward it, with the remarks you may judge suitable, to the Government of India.

To

The Right Hon'ble LORD GEORGE HAMILTON, M.P., Her Majesty's Secretary of State for India.

MY LORD,

We, the undersigned interested in the progress of Physics, desire respectfully to draw Your Lordship's attention to the great importance which we attach to the establishment in the Indian Empire of a Central Laboratory for advanced teaching and research in connection with the Presidency College, Calcutta, the most important educational institution under th Government of India. We believe that it would be not only beneficial in respect to highd education, but also that it would largely promote the material interests of the country, an l we venture to urge on you the desirability of establishing, therefore, in India, a Physica Laboratory worthy of the great Empire.

We remain, etc.,

KELVIN.
LISTER,
W. DE W. ABNEY.
R. S. BALL.
W. G. BOND.
E. T. CARTER.
R. B. CLIFTON.
G. CAREY FOSTER.
G. T. FIZGERALD.
W. GARRETT.
J. H. GLADSTONE.
J. HOPKINSON.
W. HUGGINS.
J. H. POYNTING.
W. RAMSAY.
H. E. ROSCOE.
A. W. RUCKER.
A. SCHUSTER.
G. G. STOKES.
W. STROND.
S. P. THOMPSON.

No. 1830, dated Calcutta, the 14th July 1897.

Memo. by—E. M. KONSTAM, Esq., Under-Secretary to the Government of Bengal, General Department.

COPY forwarded to the Director of Public Instruction, Bengal, for favour of an early expression of opinion, with the request that, when reporting on the proposal, he will state the probable cost of such a laboratory as is now suggested.

No. 1, dated Calcutta, the 2nd January 1904.

From—H. E. STAPLETON, Esq., B.A., B.S.C., Offg. Inspector of European Schools, Bengal,

To—The Principal, Prosidency College.

I HAVE the honour to lay before you two plans that have lately been drawn up at the desire of the Director of Public Instruction, together with certain proposals for extending the Chemical Department of the Presidency College.

As you are aware, the recent Universities Commission devoted much attention in their report to the practical teaching of Science, and having recognized that the amount of practical work at present demanded from candidates for the B.A. and B. Sc. was very much less in India than at any English University, the Commissioners stated that they considered that it was necessary not only to have increased practical instruction in the B.A. and B.Sc. classes, but also to introduce laboratory work for F.A. candidates.

The demand for an increased amount of practical instruction for the B A. candidates had already been partially met at Presidency College by the starting of the third-year class in Practical Chemistry, attendance at which has now been made compulsory, and the experience of the requirements of this class has undoubtedly been most useful in considering the possibility of extending the advantages of a practical course to F.A. candidates as well.

The first difficulty met with was that of laboratory accommodation. It is scarcely exaggeration to say that the third-year students, including the B. Sc. candidates, have filled up every available seat in the upper laboratory, while the lower laboratory (formerly the M.A. laboratory) has now to accommodate the fourth-year B. Sc. and failed B. Sc. students besides. No space is therefore at present available at Presidency College for the practical tuition of F.A. candidates, and if, as is probable, the reorganised Calcutta University calls for adequate practical teaching from Colleges as a *sine quâ non* of their continued recognition, the chief Government College will have to confess with the smallest College on the roll of the University that it cannot immediately satisfy the demand. I feel therefore little hesitation in putting forward at this juncture a scheme for the extension of the Chemical Laboratory at Presidency College, which, in combination with a similar scheme for the other scientific departments, will enable Presidency College under the new *régime* to still fulfil the idea of serving as a model to all other Colleges in Bengal.

The only possible extension that can now be carried out at Presidency College is to complete the quadrangle round the space that is at present used as a gymnastic ground. Between the two horns of the existing buildings stands one of the Physical Department's laboratories, and I began by enquiring whether this building could be worked into any scheme of addition to the present structure.

This, however, I soon found had already been answered in the negative, as the building in question is a very old one and its foundations were several years ago shown to be incapable of carrying the extra weight of even a single storey. As it is important at the present time to utilise at least part of the site for the erection of a three-storied building, I have been reluctantly compelled to draw up plans on the supposition that the laboratory must be removed, compensation being given to the Physical Department elsewhere.

My scheme briefly is as follows:—

(1) To extend the existing three-storied Chemical Department 20 feet north, adding at the end balance and map rooms corresponding to those already existing on the extreme north-east side. The upper and lower laboratories will be thus enlarged, and greater accommodation given in the northern first-floor lecture-room.

(2) To construct at right angles to this lengthened building a one-storied laboratory 80′ × 45′ for practical instruction of all our F.A. students in a joint course of Chemistry and Physics. This room would be unpretentiously fitted up with working benches and stools—primarily for employment as a laboratory; but it could also be made use of as a lecture-room by the device of a large lecturing rostrum projecting from the centre of the southern wall, at a higher elevation than the bench level.

(3) To remodel the interior arrangements of the Lower Chemical laboratory, so that a preparation-room could be provided for this F.A. Department.

(4) That if the scheme already alluded to for accommodating the Physical Department in a corresponding three-storied building to that occupied by the Chemical Department be adopted, the Chemical Department may be allowed to extend their lower M.A. (and B. Sc.) laboratory by taking in 15 feet of the physical room at present occupied by the electric installation, together with the small room now used as a carpenter's shop. This would enable extra provision to be made for the fourth year B. Sc. students, and would provide them with a small balance room.

The large joint Physical and Chemical Laboratory that I propose would be large enough to accommodate both sections of the first or second year at one time, thus saving four hours' duplicate lecturing per week to both Chemistry and Physics Professors. The practical work would be jointly supervised by two extra Demonstrators, one chemical and the other physical, as the Science course for beginners must necessarily include as much of the one science as of the other.

Various objections have been raised to erecting only a one-storied building at the end of the compound, such for instance that if a certain part of the ground-floor of the proposed physical building be reserved for an extension of the library, the new Physical Department will be smaller in area than the Chemical Department, and would therefore need to build over the proposed F.A. room. To meet these objections I have annexed an alternative plan in which a somewhat smaller F.A. laboratory runs north and south, and extra space is allotted to the proposed physical site. In this second scheme, it is proposed to convert the old M.A. Chemical Laboratory into one for B. Sc. candidates alone, and to remove the M.A. students into a new laboratory on the north side of the building. It will be seen, however, that the idea of a one-storied building is retained, as I consider that if the compound is closed by a three-storied building, the north and south breezes would be completely cut off, and the College rendered almost uninhabitable during the hot weather.

Dated Alipore, the 30th June 1904.

From—G. W. Küchler, Esq, Professor, Physical Science, Presidency College,
To—The Principal, Presidency College.

In reply to your communication of the 9th February last, asking me for my opinion on certain proposals with regard to the extension of the Physical Science buildings of the Presidency College, I have the honour to submit to you the following notes on the suggested alterations. I regret that I should have delayed so long in complying with your request, but I understood from the letter of the Director of Public Instruction that, in view of the possible transfer of the Presidency College from Calcutta, important structural additions to the existing buildings were not likely to be sanctioned at present, and that consequently the question need not be considered as urgent. For the same reason I do not think it necessary or desirable to put forward alternative plans to those already submitted, but merely to offer a few criticisms which suggest themselves in view of the experience of Physical Laboratories which I acquired in my recent visit to German and Austrian Universities. With the main idea of completing the quadrangle of the Presidency College and thus adding a new three-storied building to be devoted to the requirements of the Physical Science section, I am thoroughly in accord, provided that it is intended to retain the College in its present situation; but with regard to the proposed internal arrangements, I feel constrained to enter certain objections. There are, in the first place, certain omissions which unless remedied would render the suggested physical institute somewhat incomplete. No provision has, for instance, been made for a room to contain the large and ever-increasing collection of instruments. Such a room, well-lighted and furnished with handsome glass cases, so as to allow of ready inspection of any particular apparatus, is an essential feature of every modern institute. Secondly, no mention is made of rooms, for the private work of the individual Professors and assistants. Three rooms at least should be set apart for this purpose, one for each of two Professors and one, I think, for the chief assistant, as it is desirable that the assistants should be encouraged as much as possible to go in for original research. Thirdly, there is no mention of preparation-rooms which should adjoin the lecture-room and which cannot be dispensed with. The necessary space for these would therefore in Dr. Bose's scheme have to be deducted from that allotted to the lecture-rooms. Lastly, the provision of two rooms only for advanced students doing private work seems inadequate. The general arrangement of a physical institute attached to a College of the rank of the Presidency College or to a University and occupying a three-storied building should, I think, in this country conform to the following lines: On the ground-floor the carpenter's and mechanic's workshops, the rooms for accumulators, dynamos, and machine generally, as proposed in Dr. Bose's scheme. In European laboratories these usually occupy the cellar floor, but as this is impossible in the plains of India, it is necessary to make a virtue of necessity and to take up the ground-floor instead. There are, however, other rooms as well which cannot with advantage be placed on any other floor, *i.e.*, those rooms in which work involving precise measurement is to be conducted, and from which accordingly all vibrations must be eliminated as far as this is possible. Two rooms at least should be set apart for this purpose. If therefore the ground-floor area is not sufficient, some of the machine-rooms, etc. should take the form of out-houses. If two such rooms were added to the present scheme, the deficiency in the accommodation for advanced students would be remedied, as the work of one or two of the advanced students would probably involve their occupying these so-called precision-rooms instead of ordinary ones allotted to them on the top floor in Dr. Bose's scheme. There would then be practically four rooms available for advanced students, which I think would be sufficient. On the first-floor would be the lecture-rooms and the hall for the collection of instruments; on the top-floor the students' laboratories. The remaining space of the two upper floors would be allotted to rooms for private work for the Professors, assistants and research students. It is clear that under this amended scheme it would not be possible with the limited space available to include the four rooms suggested by Dr. Bose, which are to be designed and fitted for work of a special kind. Nor are such rooms, with the exception of the optical room, necessary. In all the institutes I visited, every room which was intended for private work was supplied with gas, water and electric (high and low potential) connections, and was consequently fully adapted for research work of any kind. It is only in private laboratories or in institutes where ample space and ample funds are

available that rooms are constructed and fitted up for special work. It is obvious that such an arrangement is uneconomical, and could only be justified after provision has been made for the more general requirements which I have indicated above. One special room, however, has to be provided, and that is the optical room, as this latter requires special dispositions, and it would be extremely inconvenient to have to alter the arrangement of the ordinary rooms so as to adapt them for optical work whenever this was necessary.

No. 14535, dated Calcutta, the 29th November 1904.

From—A. PEDLER, ESQ., F.R.S., C.I.E., Director of Public Instruction, Bengal,
To—The Principal, Presidency College.

WITH reference to letter No. 54, dated the 16th January 1904, from Mr. Edwards, regarding the improvement of the Presidency College by providing certain extra accomodation necessary for the Physical, Chemical and Biological Laboratories of the College, I have the honour to state that the question was originally kept in abeyance, as it was thoug ht possible that a portion, but not the whole, of the work now being done at the Presidency College, suoh as parts of the F. A. and B. A. work, might in the future be of smaller importance than they are at present. It seems now, however, desirable to maintain the Presidency College at the highest possible point of efficiency in all respects. I therefore request that you will be so good as to consult both individually and collectively the various Professors who wonld be interested in the developments of the College which have been proposed in recent years. A self-contained, comprehensive and detailed report of the improvements considered necessary, with any rough outline plans, may then be submitted for consideration. Detailed schemes for the development of the present Chemical Laboratory have been submitted previously. When you take up the question, you can consult all the previous correspondence on the subject, in order to formulate new proposals.

Dated Calcutta, the 30th November 1904.

Memo. by—M. PROTHERO, Esq., Offg. Principal, Presidency College.

FORWARDED to Mr. Küohler, Dr. J. C. Bose, Dr. Cullis, Mr. Jackson, Mr. Stapleton, Mr. Cunningham, Mr. Hayden and Mr. Mahalanabis, for favour of a very early report and return. The previous reports of Messrs. Küchler, Bose and Stapleton are herewith sent for ready reference.

[No. 9.]

[File 4-C 35 16.]

Dated Narikeldanga, Calcutta, the 23rd May 1905.

From—Sir Guru Dass Banerjee, K.T.,

To—The Offg. Secretary to the Government of Bengal, General Department.

I received yesterday your letter (Education Circular No. 9T.—G.), dated the 17th May 1905, in which you have done me the honour of asking my opinion on the proposal for the removal of the Presidency College to a better site in the suburbs of Calcutta.

2. In reply I beg to submit the following observations for the consideration of His Honour the Lieutenant-Governor.

3. On going through the copies of papers you have been good enough to send me, I find that the improvements in the Presidency College which have been considered necessary or desirable, are—

(*i*) the conversion of the institution into a residential College, by having suitable hostel accommodation and play-grounds for students, and houses for the Principal and Professors, close to the College building;

(*ii*) the extension of the physical and chemical laboratories, the erection of new laboratories for Biology, Geology and other sciences, and the building of more lecture-rooms; and

(*iii*) the strengthening of the teaching staff.

And it is mainly for the purpose of effecting improvement (*i*) that the removal of the College to a suitable site in the suburbs of Calcutta has been recommended as necessary.

4. While yielding to none in my desire to see the Presidency College, which is the premier College in Bengal, and which should be the model College for India, fitted with every possible improvement, and while speaking with all deference for the views of the Hon'ble Babu Bhupendra Nath Bose and Mr. Pedler and Dr. P. K. Roy, which I believe are shared by most European educationists and by many of my own countrymen, I feel bound to say that the conversion of the Presidency College into a residential College is not desirable in the existing state of things, and is not necessary for increasing its efficiency. My reasons for taking this view may be shortly stated thus:—

In the first place, improvements (*ii*) and (*iii*) are of much higher importance than improvement (*i*), and ought to be effected fully before the latter can claim our attention; but the funds available will not leave much for the former purpose if they are applied in the first instance to the latter.

In the second place, the advantages of a residential College are not so clear and unquestionable as they are generally supposed to be, specially when the number of students is so large as it is in the case under consideration. For personal influence of the Principal and the Professors will reach only a few, and the supervision for the most part will be mechanical and a matter of routine; and discipline under such supervision must be far less salutary in its effects than home-training or the necessary self-discipline of those who have to shift for themselves, subject to such supervision as a system of inspection for students' messes might secure.

In the third place, in a country like this with its diversity of races and creeds, and with the teaching staff in its higher ranks belonging to a different nationality, it will be no easy matter for the supervising authorities to have sympathetic appreciation of the situation of students, and to show due regard for their habits and sentiments.

In the fourth place, it is not necessary that a College should be of the residential type in order that it may exercise adequate control over the conduct of students, and its Professors may cultivate

friendly relations with their pupils. Such control may be sufficiently secured if the Colleges co-operate with the University in the supervision of students' messes and hostels; and the lecture-room and the laboratory may afford ample field for the cultivation of such friendly relations.

5. If then the first improvement suggested, namely, the conversion of the Presidency College into one of a residential type, be left out of consideration as undesirable in the present state of things and unnecessary for increasing its efficiency, the other two improvements referred to above in paragraph 3 which are essential and should occupy our attention in the first instance, may, as implied in paragraph B on page 3 of Mr. Pedler's note, dated the 19th April 1905, be effected without removing the College to a different place, whereas, if the first-mentioned improvement is insisted upon and with it a change of site, the second improvement will no doubt proceed hand in hand, but the third, the most important of all, will have to be postponed, at least for a time, for want of funds.

6. While thus, on the one hand, no change of site is necessary for effecting improvements (*ii*) and (*iii*) (noticed in paragraph 3) which are essential for increasing the efficiency of the College, on the other hand, removal of the College either to the northern suburbs or to Ballygunge is open to objection on various grounds.

The Presidency College is now situated almost centrically with reference to the houses of those residents of Calcutta and its suburbs, who either actually send or are likely to send their sons to that College for education; and the removal of the College, as suggested, will result in considerable inconvenience to large numbers of them. For if the College be removed to the northern suburbs, residents of Bhowanipore and Ballygunge will be put to great inconvenience, while removal to Ballygunge will produce similar inconvenience to the inhabitants of Shambazar and Bagbazar.

Then, again, neither the site recommended in the northern suburbs nor that suggested in Ballygunge is as healthy as the present site of the College, the suburbs and Ballygunge being well known to be malarious places.

Moreover, the removal of the Presidency College, as suggested, will materially affect the supervision of the Hindu and Hare Schools, the two important Government high schools in Calcutta, which are now under the control of the Principal of the Presidency College, and which cannot conveniently be removed along with that College and converted into boarding schools.

7. For the foregoing reasons, in my humble opinion, the removal of the Presidency College from its present site is neither desirable nor necessary; and for its real improvement all available funds should, in the first instance, be applied to the strengthening of the teaching staff and the extension of the laboratories.

8. In conclusion, I should add that my insisting upon the strengthening of the teaching staff must not be taken to imply any disparagement of the merits of the present staff. What I really mean is this, that with a view to increase the efficiency of teaching, the numerical strength of the staff should be increased, so that it may be adequate to take charge of the large number of students who seek instruction, and of the great variety of subjects in which instruction is sought; and the salaries of Professors should be raised so as to offer sufficient inducement to competent men in India and Europe to enter the educational service and continue in their posts as teachers.

[File 4-C/35.]

[No. 10.] Dated Calcutta, the 25th May 1905.

16

From—The Revd. Alex. Tomory,
To—The Offg. Secretary to the Govt. of Bengal, General Department.

I have the honour to acknowledge receipt of your letter (confidential), dated Darjeeling, the 17th May, marked Education Circular No. 9T.—G., and to forward the following opinion on the scheme contained in the papers accompanying your letter.

1. The inadequacy of the present Presidency College site for the purpose of a model College on enlightened principles is admitted. Extensions must be made at once if the primacy of the College is to be maintained, and these extensions must provide accommodation for residences for European and Indian professors, laboratories, and extra class-rooms.

2. Two possibilities present themselves:—(*a*) Local extensions, (*b*) Removal—

(*a*) Local extensions could be procured by tearing down the antiquated buildings on the north side of College Square (Sanskrit College, Sanskrit Library, Hindu School, University Institute) and erecting a modern four-storeyed building there. The first two floors could be used for class-rooms and laboratories, the third and fourth for residential quarters (provided with lifts and water-tanks on roofs for flushing, etc.). This would provide a magnificent frontage. Then the tank (College Square) should be filled up and made into a play-ground, reserving half for the Presidency College and half for the general public. The old buildings on the north side of College Square are picturesque, but far from economical in their use of space—open quadrangles and colonades in the centre of a city are pleasant, but decidedly wasteful when extensions are needed.

The residences would be for the European staff. Indian gentlemen are not usually comfortable in European houses, which seem too open and draughty. The tank should be filled up in any case. Tanks are a solecism in Calcutta, and are possibly also a source of danger to the public health as breeding-places of mosquitoes. No doubt the ripple on the surface of the College Square tank on a moonlight night is charming and productive of poetic thoughts, but in this utilitarian age that charm will be less thought of than the possible danger, and the certain inutility of the tank as at present restricted. Filled up, it would make a magnificent square in the centre of the city and such an open space would provide health for thousands. Instead of the ripple of the water there would be trees, shrubs, flowers along the borders, and athletic games in the square itself.

Accordingly if local extension is thought desirable the above scheme would provide it adequately, though not as ideally as removal to a *southern* suburb.

Before proceeding to consider (*b*) it would be well to provide for the dispossessed Sanskrit College, Library, and Hindu School. These might be very well removed to the outskirts of the town, say to the eastwards on or near Upper Circular Road, and would allow of a return to simple ancient Sanskrit *tol* conditions. The Hindu School (at present like any other entrance school) should specialize as a preparatory school for the Sanskrit College. Or it might be necessary to buy up the eastern side of College Square under the Land Acquisition Act and erect buildings there that would glorify the centre of Calcutta, where Hausmannising is very much needed.

(*b*) But if on general principles local extension is less desirable than migration elsewhere, the question arises, where? For the very large expenditure estimated as likely to be required, one would have to consider not only size of proposed site, but general suitability, and probable remunerativeness.

On a new site it would be possible to erect a College, with residences for professors and students on the best possible lines.

3. Dr. P. K. Roy suggests a site at Cossipore. He gives an elaborate scheme; and it will have to be carefully examined by experts before such a huge outlay is incurred.

4. Personally knowing the district as I do from frequent cycle rides in the vicinity, I am very strongly opposed to the selection of Cossipore as the site for the new Presidency College—

(*a*) The district is malarious: the district round Dum-Dum is notoriously so: the eastern part of the district is under water for several months every year. From the road to Dum-Dum Cantonments one sees water as far as the eye can reach in the rains, the period of most strenuous application in Calcutta Colleges, when malaria would prevail among students and others.

It is possible that the malarious nature of the area might be improved by removing jungle; but it would be foolish to plant down at an estimated

cost of 25 lakhs a magnificent College on a malarious site when other sites in more salubrious localities are available. I am not a Health Officer, but it seems to me that when Baranagore is malarious (west of site) and Dum-Dum district is malarious (east of site) the probability is that the Cossipore suggested site will also be found malarious.

(*b*) The suggested site is at the wrong end of Calcutta for the European professors and their wives. They would practically have to form a community by themselves, and the social life of Calcutta would suffer from the removal of the educational people from ordinary Calcutta "functions" at the south end of the city where "society" would become more than ever financial and commercial.

(*c* The suggested site is three miles from the present Presidency College and the use of tram-cars is emphasized. If a car journey has to be made in any case, would there be any great discrepancy between a journey of three miles morthwards to Cossipore and five miles southwards to Alipore, counting from the Presidency College in both cases?

5. I would venture to suggest that a site be estimated for in the area between Alipore and Tollygunge where there is plenty of good land, no malaria scourge, and contemplated tram-car facilities.

All the institutions of Calcutta—the Imperial Library, the Museum, the European shops, the Town Hall, and the Victoria Memorial—are at the south side of Calcutta, and are much nearer Alipore than Cossipore, to say nothing of the salubrious drive across the Maidan in the one case, and the crawling progress through pestiferous streets in the other. For the residents at the College, students and professors, these are points to be considered.

I may say that I have no idea what such a site might cost in the district named, but the other items would be much the same in both cases.

6. I would lay stress on the social surroundings in both places. At Alipore a distinctively European element predominates, leading to excellent conservancy, orderly arrangements, and Western amenities. It would be an excellent training for hostel students there to be surrounded by all the influences of European life in college terms, not only in respect of professors but of a general public that would learn to respect the scions of the best Calcutta houses and would impress them with the high character of the general European citizen. Mutual understanding between the two races would result at Alipore. At Cossipore there would be isolation from Europeans, except from the score of European mill employés along the river in the vicinity who would not be likely to fraternise with our students.

On the whole then, on hygienic, on topographical, and on social grounds I would prefer Alipore to Cossipore as a site for the proposed new Presidency College. As between the three possibilities—local extensions as indicated on page 1, Cossipore, and Alipore—I unhesitatingly prefer Alipore. Of the other two I am almost sure I should prefer the first, viz., a local extension as suggested on page 1. Cossipore would, in my opinion, be a very risky experiment, and a further removal from the advantages of the European end of this great city than at present exists.

I beg to apologise for the length of these remarks.

[File $\frac{4\text{-C}}{35}$.]

[No. 11.]

Dated Darjeeling, the 26th May 1905.

From—M. E. Dus. Prothero, Esq., M.A. (Oxon.), Professor, Presidency College,
To—The Offg. Secretary to the Government of Bengal, General Department.

With reference to your Circular No. 9T.—G., dated 17th May, asking for my opinion on the proposal to remove the Presidency College to a better site in the suburbs of Calcutta, I have the honour to state as follows.

1. If a site of the size mentioned by Dr. Roy is available in the position stated, I should be strongly in favour of his proposal. It will secure the great advantage of converting the College to a closer approximation to the residential type and of bringing the students and the instructive staff more closely together in their leisure time without running contrary to the public sentiment, which is so strongly opposed to the removal of the College from Calcutta. I

have only comparatively recently joined a College, having been previously employed for a long time in the inspecting branch, but my own experience of the advantage of a closer intercourse between the teachers and the taught may be thought relevant to the question at issue. During the six months I officiated as Principal of the College, I acquired an influence with the students, which I should not previously have considered possible, by taking an interest in their games, dramatic representations, debating clubs, etc. I never thought the student class capable of much affection or gratitude before, but I have certainly had cause to change my opinion.

2. Another reason which leads me to support the proposal is, that, as it is in contemplation to build houses for the Principal and Professors, in the case of such as are marked men it would certainly be unpleasant for European ladies to reside anywhere near the Presidency College.

This objection would not apply to the proposed site in the northern suburbs.

3. If the College is removed as proposed, it will be possible to secure in a great measure freedom from the undesirable surroundings, objectionable both from the point of view of morality and health, which are well known to anyone who has had anything to do with the management of the Eden Hostel.

4. I would remark that Dr. Roy's scheme takes no notice of the other Government educational institutions in Calcutta more or less intimately connected with the Presidency College, such as the Hindu and Hare Schools and the Calcutta Madrasa. The case for their removal is as strong as that for removing the Presidency College, and inasmuch as the students of the Madrasa reading for the F.A. and B.A. examinations attend lectures at the Presidency College, if the Madrasa is not to be moved, additional outlay will have to be faced for increasing the staff of the Madrasa to enable it to teach up to the B.A. standard.

5. Whilst cordially approving the scheme, I feel bound to express my belief that it will be difficult to enforce residence on a very large proportion of our students. So many of them are the children of parents, who are badly off, that the increased cheapness of living with their parents or relations, rather than in the hostel, which it is proposed to establish, will be a matter of great importance to them. With this liberty, I do not see how the Government can interfere, and therefore for a large number of students, the College must remain a day or non-residential institution. Many of our students live at such a long distance from the College that their time outside lecture hours is fully taken up with going and coming every day. Such students will not derive much advantage from the residential system, or the games and play-grounds, which it is in contemplation to establish. It is only the minority, who will be much influenced by the change, and for them its benefit will be incalculable.

6. A point of some importance relating to the proposed transfer of the Eden Hostel to the Medical College is that the consent of the private benefactors, such as the Raja of Maisadal, by whose contributions the hostel was in a large part constructed, or their heirs, will have to be secured. A similar difficulty will have to be considered with reference to the Elliott Muhammadan Hostel, if, as I have ventured to suggest, it is considered that the removal of the Presidency College entails the removal of the Calcutta Madrasa.

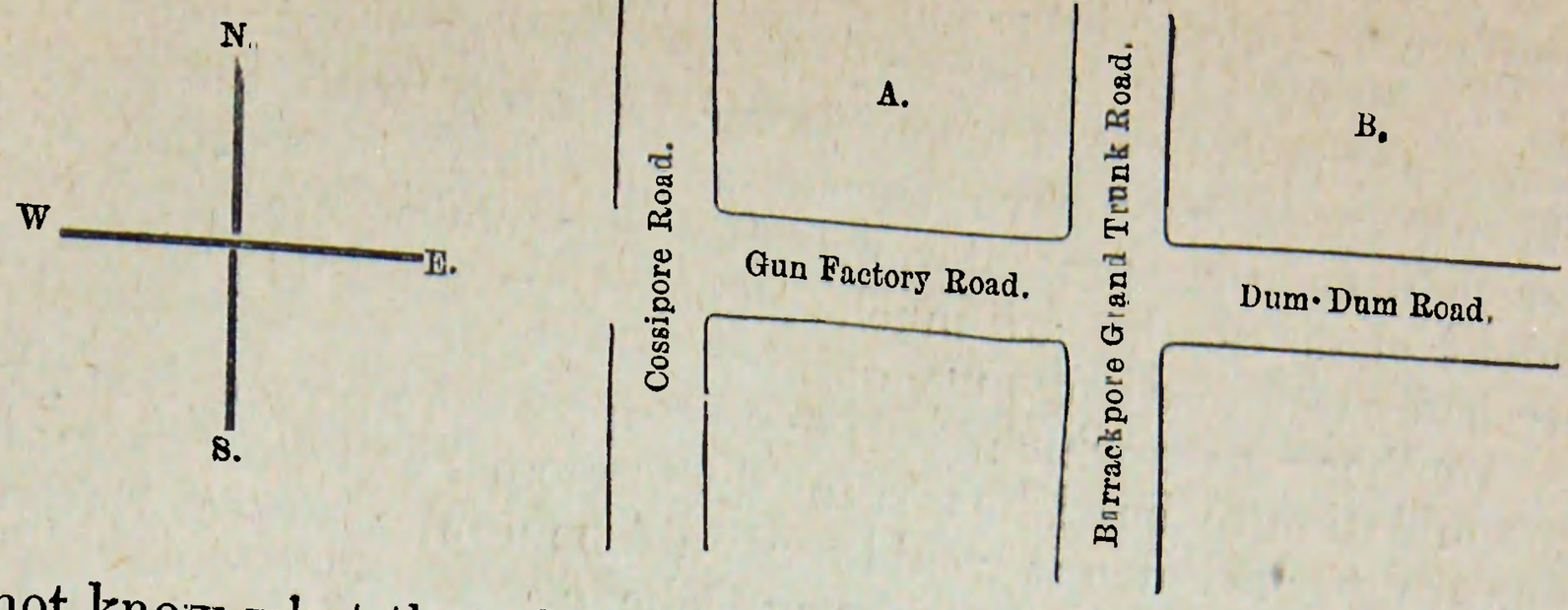
[No. 12.] [File 4-C 35 .]

Dated Calcutta, the 27th May 1905.

From—The Revd. Alex. Tomory,
To—The Offg. Secretary to the Government of Bengal, General Department.

In continuation of my letter of 25th instant, I have the honour to say that I have this evening cycled round the site suggested in the letter of

Dr. P. K. Roy for the new Presidency College, represented by blocks A and B on plan below :—



I do not know what the advantage is in having the buildings on both sides of the Barrackpore Trunk Road. But I want to warn you that the ground level in blocks A and B is below the road level and the ground is covered with water all the rains. I visited the Cossipore Horticultural Gardens incidentally. It is part of block A above, and the Manager informed me that it was malarious, and flooded in the rains. The ground level is under road level. A good deal of the land in question is garden land, not in our sense, but densely overgrown. There are a number of tanks, each garden having at least one for irrigation purposes. These would have to be filled up as part of the scheme.

Block A is very objectionable on other grounds. It is faced to the south by the Tramway Horses Infirmary and the new terminus of the goods traffic of the Chitpore-Cossipore section of the Eastern Bengal State Railway. The noise of shunting would be very disagreeable either for students or residents.

The west boundary is the Cossipore road, with open drains on both sides, and a regular low-down native bazar, peopled apparently by mill-hands and their families and other followers.

I cannot imagine how any responsible person would fix on this block as an an ideal site for a splendid College. In charity therefore I am bound to assume that block A is meant as a play-ground or maidan for students, and in that case the question arises whether the expense of raising the whole level and filling up the tanks would not be prohibitive, considering the object. Block B has not the disadvanges of block A, but it is far from a good site for the Model College. There is too much of the mill-hand and similar element about. That might be cleared from the immediate neighbourhood of block B, but even then the approach would be unpleasant.

I felt that I ought to send you these additional notes, based on to-day's observation.

[No. 13.] 30th May [File 4-C/16.]

No. 21Con., dated Calcutta, the ~~1st June~~ 1905.

From—The Hon'ble Mr. F. W. Duke, Offg. Commr., Presidency Division,
To—The Secretary to the Government of Bengal, General Department.

Replying to your Education Circular No. 9T.—G., of 17th May 1905, on the proposal for the removal of the Presidency College to a better site in the suburbs of Calcutta, I have the honour to say that in my opinion the alternative lies between the proposals A (1) and E of Mr. Pedler's note. The former which provides for the necessary extension and development of the College, and for building two or three new and self-contained science laboratories, that is to say, for improving the College as a purely teaching institution, could be effected by the acquisition of land close to the present site at a high but relatively moderate cost. Any of the other proposals would either be prohibitive as involving extensive acquisition in the heart of Calcutta, or partial and ineffective as taking the College very litte beyond A (1) and making no real provision for residence, recreation or supervision.

2. It seems to me, however, that the proposal A (1) would not provide adequately for modern requirements. I presume that Government has definitely decided that a model College must be something more than an agglomeration of class-rooms, and that much more is due to its students than

the mere provision of lectures. But the cost involved even in scheme A (1) would probably be so great as to deter Government from making any further extensive changes in the College for another generation.

3. The proposal E is therefore the only one which renders the development of the College possible as a residential or potentially residential College with adequate recreation grounds.

4. I have a superficial acquaintance with Ballygunge and Tollygunge, and also with Cossipore and the land along the Barrackpore Trunk Road. I believe that the region indicated by Dr. Roy is the best, namely, the tract on the Barrackpore Road, north of the Cossipore Gun Foundry Road. In this I am supported by Mr. Bernard who has, I believe, consulted his District Engineer. All the outer suburbs are esteemed unhealthy; but, so far as I can learn, the Cossipore region is less so than the more outlying tracts of Ballygunge and Tollygunge. The country is better cleared and has, I think, a better fall towards the northern end of the Salt Lakes. At the point indicated by Dr. Roy there are some extensive garden in a neglected condition of which the price could not be excessive. The site is also more suitable for local students, it is within walking distance, say 1½ miles, of the northern end of Calcutta, and within, I should judge, the smallest tram fare (once lines are laid on the Barrackpore Road, as I believe, they will be) of the Harrision Road. Dr. Roy informs me that of the students whose houses are in Calcutta, about 223 live north of the Harrison Road against 186 south of it. Any site we could find in Tollygunge or Ballygunge would be too far for those at the northern end, even by tram. At least it would involve great loss of time and expense.

5. I am bound to observe, however, that any change of site is likely to occasion an extreme outcry. Assuming residence not to be made compulsory, in the first instance, and it seems to me that to make it compulsory would occasion as great an outcry as arose amongst the native community when they assumed that the College would be removed to Ranchi, or suppressed in favour of the Ranchi College, then short of that the site which I approve as the best and nearest to the town will still necessitate a regular expenditure on tram fares by the great majority of the students. This expenditure will not be less than Rs. 3, and for those further off may amount to Rs. 6 monthly. This alone is quite sufficient to occasion loud and violent opposition. I need not do more than advert to the perversity with which practically every Government proposal is misrepresented in Bengal. When the natural conservatism and suspicion of the class with whom we have to deal is fortified by a substantial ground of complaint, it can be understood how intense the opposition is likely to be. It has been distinctly shown that the upper and upper middle classes regard the Presidency College as an institution in which they have a vested interest, and its want of conformity to modern ideas on the one hand, or any improvements which we can hope to effect in it on the other, will weigh very little with them as against any change which makes it more expensive or less available.

6. I would therefore suggest that if the step of moving it to a suburban site is considered to be essential to its improvement, that step should be taken with extreme caution, and native opinion should be prepared for it not by obtruding any ready prepared scheme but by gradually exposing the impossibility of progress under existing conditions. If opinion can be brought round to the necessity of reform, the fact that a change of site is an essential condition to reform may be recognised. I make these observations because the benefits of the College are almost exclusively enjoyed by one particular class, and it hardly seems worth while to force a benefit upon that class at the expense of all the abuse and political odium which will be excited, unless it believes that the demand proceeds from itself.

[Nos. 14-15.]

Dated Calcutta, the 8th June 1905. [File 4-C 35/16.]

From—G. W. Kuchler, Esq., Meteorological Reporter to the Govt. of India,
To—The Offg. Secretary to the Government of Bengal, General Department.

In reply to Circular No. 9T.—G., dated 17th May, in which His Honour the Lieutenant-Governor asks for an expression of my opinion on the proposal

for the removal of the Presidency College to a better site in the suburbs, I have the honour to submit the enclosed note on the question.

Note on the proposed removal of the Presidency College to a better site in the suburbs.

From hardly any point of view can the present site of the Presidency College be considered satisfactory. Regarded merely as a day college, where work is done between stated hours, the only argument in favour of its situation is that it is central. But such an argument is nowadays considered of little account unless the central situation is accompanied by other advantages of a more essential nature. It is after all a very trifling hardship if young men of college age have to travel either on foot or by some other mode of locomotion a considerable distance to the place of their studies. To my mind it is indeed a distinct advantage, as with many young students this compulsory locomotion forms their only bodily exercise, and even if it take the mild form of transportation by carriage or tram, it still has a certain value. Especially is this true of the Bengali student, whose natural disinclination for bodily exertion assuredly needs no artificial encouragement. The only advantages in fact afforded by a central situation as such are those which arise from libraries, reading and common rooms and laboratories to which access is permitted outside the usual college hours. These advantages have, however, up to the present not been associated with the Presidency College, and even if they had been, they would have been more than counterbalanced by the drawbacks which the situation of the college presents in other respects.

The chief characteristics which in my opinion should be aimed at in selecting a site for a high grade day college are hygienic surroundings, freedom from noise and dust, and sufficient space, not only for present requirements in the matter of buildings, but also for future expansion. Educational work should be done in quiet places and in pure air, and it is especially desirable for scientific work that there should be no noise, no vibration, and no dust.

Judged by these requirements, the present site of the Presidency College considered merely as a day college stands condemned. Its hygienic surroundings are of the poorest, the air is full of dust, and the noise and vibration caused by the traffic in the streets are intolerable. Further, the needs of the scientific departments have far outgrown the space accommodation at present at their disposal, and no relief is possible except by the acquisition of the expensive though unsavoury land surrounding the college. As Mr. Pedler has pointed out, no addition beyond the construction of a well-planned chemical laboratory has been made to the college for the last thirty years, so that a large amount of arrears in the direction of new buildings has now to be made good.

The need for new buildings is most pressing on the science side. This is the natural outcome of the recent awakening of India in common with other countries to the benefits of a real scientific education. It should, moreover, be noted that a special impetus will in Bengal be given to the demand for increased facilities for acquiring scientific knowledge by the regulations founded on the new University Act which are about to come into force. These facilities must necessarily include the provision of new laboratories of a modern type in the various branches of science which the University proposes to include in its curriculum. Now, whatever be the future relations of the University to its affiliated colleges as regards post-graduate studies, I think it would be a great mistake if the leading Government college in Bengal were to give up direct and active participation in the highest kind of educational work. It is, I imagine, no breach of confidence to state here that one of the Committees at present engaged in drawing up University regulations has framed a scheme for determining the relations of the University to the recognised colleges in the matter of post-graduate courses of study. This scheme, which as far I can judge is perfectly practicable, aims at concentrating and economising the energies of the various colleges with regard to higher work following the examinations for the ordinary degrees of B.A. and B.Sc. But, while the University will by this agency actually become a teaching body, it is not intended that the contributing colleges should lose their identity thereby, but merely that they should be drawn into closer union with the University and form a recognised abode for true University studies. It is in this way in fact, *i.e.*, by the provision of men and material, that such of the colleges as are in a position to do so will contribute to the support of the University. Should this scheme be adopted, it will throw on the colleges and naturally in the first place on the Presidency College the chief onus of providing the facilities necessary for carrying on real University work. But with it or without it a certain amount of independence of action should I think be always left to the Presidency College, so that it may form a model for the University and, if necessary, act as a check on any future retrograde tendencies on the part of that institution.

I have digressed at some length on this question of the relations between the University and the colleges, as on it depends largely the necessity for the provision of increaed facilities at the present moment for advanced work in the Presidency College and therefore to some extent the question of the removal of that institution to another site.

It is indeed the necessity for the immediate extension of the present complex of college buildings which gives a real practical interest to the question under consideration, as the

unsatisfactory conditions of the present site might hardly by themselves constitute a sufficiently powerful reason for the radical remedy afforded by a complete removal of the college. If, however, it is admitted that the construction of new laboratories for the Presidency College is urgently called for (and I would strongly press this view on Government), and if the construction of these laboratories on an extension of the present site involves a very heavy expenditure, it certainly seems desirable, provided a reasonable sum can be realised by the sale of the present property, to remove the college to a better site instead of perpetuating the disadvantages of the present one. Such a step would involve little or no pecuniary loss, and besides the very considerable benefits already alluded to which could be secured by a change of situation, there would be the additional one that not only the new science institutes but also the portions of the college devoted to literary and philosophic work would be designed from the outset with a view to their ultimate purpose and not merely consist, as Mr. Pedler has pointed out to be the case in the existing Presidency College, of an aggregate of rooms adapted as best they can be to the particular educational work for which they are required.

So far I have confined myself to the arguments in favour of moving the Presidency College as a non-residential institution. If, however, it is intended, in accordance with the requirements of the new University Act, to give a more or less residential character to the college, the arguments for removal acquire overwhelming force. It may I think be taken for granted that while great improvements can no doubt be introduced in the matter of hostel supervision and while much can be done to increase amenities of student life in the present hostel by the provision of reading and other common rooms, by the institution of clubs, literary and athletic, and by the consequent encouragement of social intercourse amongst the students themselves, in a word by giving a collegiate instead of a mere lodging-house character to the hostel, any attempt to establish a residential college on the present site is out of the question. The expense alone would be prohibitive, but quite apart from this, the mere provision of professors' houses in more or less proximity to the hostels would constitute a very small step towards the realisation of the conditions of a residential college in the full sense of the term. Moreover, it is doubtful whether one of the chief objects of such an institution, *i.e.*, the promotion of friendly intercourse between professors and students, would be materially furthered by the mere propinquity of residence of these two classes in such a neighbourhood as College Street. It is true that the minimum requirements of the University Act amount to nothing more than the provision of residences for the Principal and perhaps one or two professors as near as possible to the college or the hostel, but it is hardly likely that the Government would be content to work down to this minimum, and even if it did so the expenditure entailed in the provision of adequate residences and in the improvement of the hostel would still be very heavy and out of all proportion to the very meagre results which would follow.

The real objection, however, to the perpetuation of the present hostel and to any scheme for the addition of further residential quarters either for students or professors lies in the utter unsuitability of the site. All that I have said above with regard to the hygienic surroundings of a non-residential college applies with double force when the residential element comes in, and in the case of the students a still more important point is that the moral surroundings should be as pure as possible. The less however said about the moral and hygienic conditions of the neighbourhood of the Presidency College the better. It is true that there are many other Arts Colleges in the same neighbourhood and, further, that the Medical College is not only close to the Presidency College but that the authorities of that institution propose acquiring a hostel in the quarter which I have just stigmatised as objectionable. With regard to the latter there are special reasons why the Medical Hospital and consequently the college attached to it should be in the centre of the town, and there are also special reasons why the students attending the college, who moreover are on an average considerably older than the Arts students, should live close to it. As for the private Arts Colleges, they are for the most part day colleges, to which not even all the reasons for removal (such as for instance the demand for additional space) which hold in the case of the non-residential part of the Presidency College, are applicable. Moreover, should the authorities responsible for these institutions propose to erect hostels in connection with it, it is not possible that they might follow an initiative set by Government and choose more desirable sites for this purpose in the suburbs of Calcutta.

I have purposely kept the questions of the removal of the non-residential and residential parts of the Presidency College separate, as if any obstacle, which however I do not anticipate, should arise in the way of removing the College as a whole, the removal of the hostels alone would, as I have pointed out in the previous note, be still quite feasible. So numerous, moreover, and powerful are the arguements in favour of this part of the scheme that it seems a case where an opportunity for its execution should be created and not merely awaited by Government. Fortunately, however, the opportunity is here again forthcoming, for, as has been already pointed out, the provisions of the University Act make it necessary to face the question of very considerable expenditure in connection with the improvement of the hostel and the erection of houses for at least the Principal and one or two professors.

There is one aspect of the project which I have not touched on, and that is, the attitude which the leading Indian residents of Calcutta would assume towards the scheme. The question of expediency must largely be determined by this attitude, and it is therefore a matter for congratulation that the speech by the Hon'ble Bhupendra Nath Bose in the Legislative Council seems to indicate that not only would there be no opposition to the

removal of the College, but that such a removal would actually be welcomed by the great body of Indian opinion. I have likewise in the above remark made no reference to the proposal to erect the new science laboratories, which will presently be required, in a less congested area than College Street, leaving the present buildings to the Arts Section of the College as, though I still think that in the absence of anything better such a scheme would be both desirable and practicable, it has not nearly so much to recommend it as the other alternatives put forward and need not therefore be taken into present consideration.

Finally, the opportunity of removal afforded by the present juncture of affairs is improved still further by the possibility which seems to offer of finding a purchaser not only for the existing Presidency College but also for the Eden Hostel. It is after all not sufficient to assess the buildings and land of the College and Eden Hostel at a certain value and then to set the amount against the cost of the acquisition of new land and the erection of new buildings. Property such as the Presidency College and the Eden Hostel hardly finds a ready market, and unless a purchaser were found, ready to acquire the property at its nominal value, the financial difficulties in connection with the project would still be considerable. If, however, the Medical College authorities are willing to take over the Eden Hostel and if the University should find the existing college buildings suitable for the purposes of the extension which it is at present contemplating, one serious obstacle in the way of the realization of the scheme will have been removed.

To sum up, the points in connection with the question of the removal of the College which I have endeavoured to establish are the following:—

(1) The situation of the Presidency College regarded merely as a non-residential institution is highly prejudicial to the work carried on there.

(2) The situation of the Eden Hostel is open to still more serious objection, and if nothing else be done the hostel at least should be removed to an open healthy site in the suburbs, and houses for the Principal and some of the Professors built in connection with it.

(3) Should the Presidency College and the Eden Hostel be retained in their present site, a very heavy expenditure will have to be faced in connection with the acquisition of land, the erection of new laboratories and Professors' residences and the institution of other improvements, and with it all the result will be unsatisfactory.

(4) Indian opinion is apparently in favour of the removal of the College.

(5) It seems therefore desirable to combine the funds necessary to carry out the improvements mentioned in (3) with the money which could be realized from the sale of the existing land and buildings and devote the total amount to the erection of a model residential college in the suburbs of Calcutta.

The above is the case for the removal of the College as it seems to me to stand at present. With regard to the selection of a new site should the removal be decided on, it is perhaps premature to say anything, as it would probably be left to a special Committee to make recommendations on this question. I would merely remark here that apart from the question of healthiness which will probably be the most important determining factor in the selection of the site, there are certain considerations which seem strongly to favour the choice of a southern suburb. The north side of Calcutta is practically isolated from the chief scientific institutions of the city, and it certainly seems a matter of considerable importance that the new Presidency College should be within easy access of the Indian Museum, the Zoological and Horticultural Gardens, and the Imperial Library. It seems further desirable for different though no less cogent reasons that the new College should not be far distant from the Maidan, the great open space of Calcutta, to which there is nothing equivalent in the north end of the town.

Lastly, I am tempted to say a word with regard to Dr. Ray's estimate of the probable cost of the scheme. This estimate seems to me unduly high, and it would certainly be a pity if a project eminently desirable in itself were wrecked simply owing to an impression that the cost would be prohibitive. There are many obvious directions in which the estimate could, if necessary, be reduced. For instance, in the case of the minor laboratories it is sufficient that the buildings should satisfy the requirements of the present and of the immediate future, but that they should be so designed at the outset as to admit of extensions at a later period when these become necessary. If this were done, the biological and geological laboratories could certainly be cut down to half a lakh each, while thirty thousand rupees would be ample for the astronomical.

Again as to the Professors' houses, it is neither necessary nor desirable to house all the Professors nor even a majority of them, and a corresponding reduction might be made under this head. The common room and gymnasium seem also too highly estimated for.

As for the land, 300 bighas appears excessive, but it is difficult to estimate the cost of this item beforehand. Certainly if the land of Kidderpore House, which is one of the suggestions made by Mr. Pedler, could be acquired, it would form an ideal site, as the grounds would require few alterations to adapt them to their new requirements and the cost of acquisition would, I believe, under Government regulations be nil. In any case, the estimated cost of the scheme might readily be reduced to 20 lakhs. Against this may be set the cost of improvements and additions to the existing buildings of the Presidency College in case of non-removal, which can hardly be put down at less than

10 lakhs, as well as the amount to be obtained from the sale of the Presidency College, say from 6 to 10 lakhs. Under these circumstances I venture to think that the removal is financially justified.

The 7th June 1905.

G. W. KÜCHLER.

[No. 16.]

FILE ~~8-C~~ / ~~35~~ .]

Dated Calcutta, the 12th June 1905.

From—BABU SITA NATH ROY,
To—The HON'BLE Mr. H. W. C. CARNDUFF, C.I.E., Secy. to the Govt. of Bengal, General Department.

I HAVE the honour to acknowledge the receipt of your Educational Circular No. 9T.—G, dated the 17th May, and enclosures, inviting an expression of my opinion on the proposed removal of the Presidency College to a better site in the suburbs of Calcutta. In reply I beg to submit the following observations.

When the idea of starting a residential college at Ranchi on the lines of the well-known institutions at Cambridge and Oxford was first mooted by His Honour, some of my educated countrymen were startled and surprised, for they then apprehended that the new institution partly from its novelty and partly from its numerous superior attractions, and especially on account of its several new features and advantages, would gradually draw away a large number of students from the Presidency College and thus make it die of inanition. In the proposal for a new college, which, it was supposed, would in time beat down the Presidency College in all respects, some of my countrymen saw a design to smother the old one and thereby do away with high education altogether.

Instead of being grateful to Government, instead of thanking it for its earnestness and benevolence in promoting and developing high education and in introduc ing a new feature in it and thereby imparting a powerful impetus to high education, my countrymen did not hesitate to ascribe motives for attempting to supply what was so urgently needed. But this much may be said in defence of my countrymen that they had no motive in being wilfully perverse: they were simply carried away by the panic of "high education in danger." Moreover. it is well known that the Presidency College has hallowed associations of its own, which have rendered it an object of affection and reverence to all.

It is the premier educational institution in this country, the best of its kind, and in one sense the oldest Government College, and almost all the best and respected men amongst us in different professions and walks of life and almost all the distinguished and highest Indian Judicial and Executive officers and most of the well-known *savants* having been the products of this College, and it being still looked upon as the pivot of the hopes and aspirations of our youthfuls, anything that goes or is apprehended would go to detract from the usefulness of the Presidency College, or lessen its importance in the eyes of the public or render it less attractive is sure to be looked upon with feelings of distrust and suspicion, if not with positive disfavour.

It is to the above feelings that the opposition to the Ranchi College scheme was due, and there would have been little or no opposition—at lest it would not have been so acute—if with the proposal for a residential college at Ranchi the present scheme for renovating the Presidency College on such a broad and satisfactory basis and converting it into a residential one had been simultaneously put forth. But at the same time it must be admitted that, so far as English education in this country is concerned, the idea of a residential college is a thing of yesterday, is a new growth, and as such before the Ranchi scheme was broached by His Honour and before the present Dacca College scheme was matured, the idea of bodily transferring the Presidency College from its present central and advantageous site would have been considered as outrageous and looked upon with positive disfavour. But now with the Ranchi and Dacca schemes before us, people are rather wondering why nothing has yet been done to convert the Presidency into a residential college and otherwise to remodel and renovate it, and thereby enlarge its sphere of usefulness.

Formerly it would have surely been considered as an act of sacrilege even to think of removing the Presidency College from its present site, and I myself

would have seriously questioned the propriety of any such proposal. But whatever doubts I might have had on the subject, they have entirely been dissipated by the perusal of the very able and thoughtful notes of the Hon'ble Mr. Pedler (my former *guru*) and of my esteemed friend and countryman, Dr. P. K. Roy.

On account of its situation in one of the most congested quarters of the city, surrounded on all sides by large and costly buildings, with no room for expansion except at a prohibitive cost and by dislocating a very large population, whose ancestors settled there with the foundation of the city itself, it is not possible to secure the very large quantity of land so necessary for the extension and development of the College and its various other purposes.

As pointed out by Dr. Roy, about 300 bighas of land would be required to carry out the above objects and to place the college on a sound footing and make it worthy of its position as the premier College in the Province, if not in India. But I beg to submit that it would be a sheer waste of money to make such an extensive acquisition in the heart of the city itself, and that large acquisition cannot be made without encroaching on the Harrison Road itself and on the sites now occupied by some of the oldest residents of the city.

Another fatal objection to the enlargement of the College on its present site is that plague, which has secured a permanent footing in the Northern Division of the city, where the College is, breaks out periodically with great virulence in February and March, that is, when the University examinations are held, and this has not only a great disturbing effect on the studies of the students, but has the further serious effect, by creating a panic amongst the students, who mostly live in the congested quarters of the city, of scaring away a large number of them from such examinations.

Moreover, it is extremely desirable that students and their professors should live in an atmosphere of adsolute purity. It does not seem appropriate to make a lavish expenditure of money for providing residential quarters for 7 to 800 students and their professors on a site which is so temptingly close to all the vile allurements of the city.

For the above reasons, with the necessity of converting the Presidency College into a residential one domonstrated beyond doubt, I have no hesitation in heartily supporting the recommendations of the Hon'ble Bhupendra Nath Basu, the Hon'ble Mr. Pedler, and Dr. P. K. Roy that the Presidency College should be bodily removed to a suitable site in the suburbs.

While it is admitted that the proposed site should be in the open country on high and dry land free from the influence of malaria and should be near the river, it must not be very far away from the Northern Division of the town, for the majority of the students of the Presidency College are recruited from the Northern side, and it is here where the higher and middle and educated classes and the merchants and traders, whose sons and relatives attend lectures at the Presidency College, live.

The site selected by Dr. P. K. Roy, which is bounded on the southern side by the Gun Foundry Road and on the west by the broad Cossipore Road, seems to be admirably suited for the location of the premier College in India.

Besides its other advantages, its close proximity to the river Hooghly and the enormous piles of buildings occupied by the Gun Foundry and Shell Factory, and having a large open space on the south, the location of the College on the above site, while ridding Cossipore of its numerous filthy and congested *bustees* and thus adding to the sanitation and beauty of Cossipore, will have the most desirable effect of automatically relieving a good deal of the congestion of the Northern part of Calcutta.

For various reasons I cannot approve of removing the College to Ballygunge or Tollygunge or to any site east of the Barrackpore Trunk Road, as they are all more or less tainted with malaria and far away from the Northern Calcutta.

For some years past the Presidency College has not been able to retain its old reputation of being the premier College in India. If it is intended to fulfil the place assigned to it of being the premier educational institution in India, of serving as an exampler to others, of serving as a model, of what a high-class educational institution should be, of moulding the character of high education in India, it won't do merely to raise a magnificent building for the

College, to erect attractive residences for the professors and equally attract iv hostels for the students and to provide an extensive and beautiful play-ground for the boys, but something more solid is necessary to be done which may increase its efficiency and usefulness, and thus make it the coveted resort of all genuine seekers after knowledge. I therefore heartily support the suggestions of the Hon'ble Mr. Pedler and Dr. P. K. Roy, that the teaching staff should be strengthened and recruited by the very best of professors in the several departments available here and in England, and that the College should be fitted up with first class laboratories and all the necessary applicances for teaching Physics, Chemistry, Biology, and Geology, and, lastly, it should have a first-class library worthy of the premier College in India.

If His Honour would be gracious enough to give us a renovated Presidency College on the lines indicated above, fit it up with all the necessary laboratories and costly appliances and man it with the best of teaching staff and convert it into a residential institution and otherwise place it on a solid and satisfactory basis, His Honour's name, associated as it will always be as having been the author or founder of three residential colleges in Bengal, will for ever remain enshrined in the grateful hearts of a grateful nation, and will be handed from generation to generation as having been the best promoter and patron of high education in India.

Lastly, a word or two about the proposed site for the College and the hostels. In my humble opinion, a site nearer the river is more desirable, as it will enable the several hundreds of students and their professors, whose health must be the first consideration with the authorities, to inhale the pure air of the Hooghly. I therefore beg to recommend that the residential quarters for students and their professors should be built on that extensive ground (to the west of Cossipore Road) now occupied by the numerous *bustees* and the Jheel Press, while the College and the play-ground may, if necessary, be placed on the site to the east of Cossipore Road.

[Nos. 17-18.]

[FILE 4-C/35/16.]

Dated Colombo, the 17th June 1905.

From—J. A. CUNNINGHAM, ESQ., Professor of Chemistry, Presidency College, Calcutta,

To—The Offg. Secretary to the Government of Bengal, General Department.

I RECEIVED your circular letter (Education Circular No. 9T.—G.), dated the 17th May 1905, a few hours before leaving Calcutta on a previously arranged expedition to investigate the electrical state of the atmosphere in the south-west monsoon as it passes over Ceylon. My hands were, at the time, very fully occupied in getting my apparatus into ship-shape order; and during, and since, a voyage which was delayed by two days owing to the breakdown of the main circulating pump of the S.S. *Sumatra*, I have been busily engaged taking observations over a field which was already too wide for the time at my disposal. I trust therefore that His Honour the Lieutenant-Governor will accept my apologies for the delay in forwarding, as well as for the other defects of the Note on the removal of Presidency College which I now enclose.

NOTE ON THE REMOVAL AND RECONSTRUCTION OF PRESIDENCY COLLEGE.

Introductory.—Some suspicions that Government did not mean well by higher education in India have from time to time been expressed, especially *á propos* the recent legislation affecting the Indian Universities. It could not indeed be regarded as wonderful if the subject, from its very foundations, had been seriously discussed by those in authority. We are at the present time in India, and I believe most acutely in Bengal, exposed to all the proverbial dangers of a little learning. It must be remembered that India is not altogether exceptional in this matter, though the evil is perhaps more pronounced here than elsewhere. But in France and Russia the same sort of disturbance is being felt, and perhaps we have really much to be thankful for that the disappointed B.A. does not betake himself to anarchy and nihilism in Bengal. In Russia the prime motive of this disturbance is, probably

legitimately, political rather than educational. In France, however, it is almost certainly attributable to a very faulty system of public instruction. There is indeed a quite remarkable similarity between the exaggerated multiplication of examinations, the teaching out of text-books, the learning by the help of memory alone, and the total absence of the scientific *method*, in France and in Bengal. Germany, America, and Japan may on the other hand be cited as countries which are entirely happy in their education and well satisfied with the return for a very heavy expenditure on education, of the right sort, in the main. I take it that if the question has been fundamentally reconsidered in India, it has been authoritively decided in favour of education—more education, deeper education, and, in short, real education.

Similarly I shall assume that it has been conceded by the Government of Bengal that Presidency College does fill what, without it, would be a serious gap in a complete scheme of education; that its usefulness must be extended and its influence deepened.

In response to the Principal's invitation to the professors of Presidency College, I have already submitted a brief note dwelling on what I conceive to be two of the most urgently needed reforms in the general organisation of the teaching staff (and which I thought might possibly not be pressed forward by the other professors); and I also submitted a preliminary list of the special requirements of the chemical department with which I was more intimately and particuiarly concerned. In that note, written after the speech of the Hon'ble Babu Bhupendra Nath Bose and His Honour's reply on the occasion of the Budget Discussion for 1905-1906, I practically took it for granted that, as soon as the matter was looked into at all, the case for the removal of the college would be found overwhelmingly strong. I gather from the enclosures circulated with Circular No. 9T.—G. that my note has been forwarded by Dr. P. K. Ray and has been submitted to His Honour the Lieutenant-Governor. I therefore take it that what is wanted now is a rather more general and a fuller expression of opinion on all the questions involved, in the removal and hence necessarily the reconstruction, of Presidency College. I shall, therefore, in what follows freely express my own private opinion on all the points which occur to me as of particular importance, and especially such as I think may not be so fully dealt with by the other persons connected with education in Bengal who are likely to have been similarly consulted, confidently believing that such a free expression of opinion is in accordauce with His Honour's wishes. Some of my views may not be in entire agreement with what has come to bo more or iess generally accepted in Bengal, and I therefore conceive it to be necessary to support them with what arguments I can muster; and as this ccurse may lead me on to a considerable length I shall not re-emphasise as fully as might be, what I have already written in my previous note. I would ask this to be taken in conjunction with that.

Presidency College.—I do not think that it is at all an exaggeration to say (with Mr. Pedler) that the rate of progress towards the highest education in Bengal depends very largely on the promised reorganisation of Presidency College.[1] The education given must be on sound lines even if those should necessitate a separation from a possibly again demoralized University, though we all hope that will not be necessary.[2]

Mr. Pedler's note gives what may, I suppose, be regarded as the historic reasons for the fact of which all concerned are only too painfully aware, viz., the hopeless unsuitability of the present site and buildings of Presidency College to the purpose for which it presumably exists. Its bare, unfitted, and untidy rooms can only help to encourage that slovenliness which seems to come peculiarly easy to the Bengali and perhaps to many other students, if not constantly corrected and discouraged. Our present very limited means of counteracting the physical evils of the Indian climate seem to entail the necessity of keeping large doors wide open, on at least two sides of every room which we wish to have well ventilated, during a great part of the working year. Many of the lecture rooms in Presidency College, thus of necessity kept open, are so situated that they are constantly being passed and repassed by students and teachers in the ordinary course of their necessary moving from one part of the college to another. Indeed the college is so near to two streets that in nearly half its rooms it is often difficult for a professor to make himself heard, even after he has had to close windows in direct violation of sanitary laws and against the protest of his own olfactory senses. On some occasions the whole neighbouring bazar echoes to a marriage feast quite above and beyond the more ordinary noises of the streets. These are only some of the more general and obvious defects of Presidency College as it is at present and in respect even of the kind of work that it has up till now attempted. A complete catalogue of its nuisance and shortcomings would probably be only tedious.

They are, as it seems to me, in themselves sufficient to justify the removal of the college to a new site, where a fresh start can be made on lines and plans that are approved

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[1] The future of higher education will also be much affected by the organisation of the Education Service It is my firm conviction that men are more important than bricks and mortar, and that the most important man in Presidency College is its Principal. He must be a leader in educational matters, and his duties on the social side are by no means insignificant. At the same time he cannot, *ex-officio*, control the whole University without apparent injustice to other Colleges, though if he is the right sort of man, he must profoundly influence it. But if the University is to be kept continuously on the straight path of honesty and efficiency it would require a "Principal" (like Professor Rücker in London University) or a Vice-Chancellor who gave the greater part of his time to its affairs and was therefore practically *ex-officio* Director of Public Instruction. This would naturally arise with the development of the post of Assistant Director of Public Instruction as head of the primary and secondary education in the province. This is practically the present arrangement, but its value would be greatly enhanced by a recognised permanency.

[2] The College should, for instance, refuse to recognise two different science courses (for B A. and B.Sc., respectively) such as have been in the old University. I understand, however, that the Committees of the new Senate have recognised that science teaching must be to the same extent scientific whether its recipient aspires to be called B.A. or B.Sc. (*cf.* Mr. Pedler's note, middle of page 2).

by those most likely to know. Even to meet these general defects every detail of the new design must be very carefully scrutinised. It will obviously not suffice to take a design intended for Europe and plant it in its Western simplicity in India. Nor will it on the other hand, do to take an Indian design intended for an office or a barrack and call it a college. I am doubtful if the proper lines have yet been struck combining the requirements of a college with those of the Indian climate. This is more particularly true of science laboratories where the educational requirements are of a very special character. It is one of the minor points in favour of the suggestion to house several of the natural sciences separately. A suitable arrangement of such instituties (if I may adopt the German word) in the same compound would make it possible greatly to diminish the interference which each department suffers from the perfectly legitimate, but often must disturbing movement of students to and from the other departments of the college. It would also allow of a certain amount of invaluable experimenting as to details of construction by the individual professor concerned each with the designing of his own institute. I am one of these unfortunate heretics who cannot believe in one individual or group of individuals, arriving at once at the final and the absolutely "best" solution of any problem that arises in actual life. Each professor—if he is worthy of the name—will have his own ideas as to the most suitable plan; and even though a professor, he may be pardoned for some of the weaknesses to which flesh is heir, and in particular for taking an innocent pride in carrying out his own individual ideas to a conclusion on a consistent plan. For it does not by any means follow that because there is an element of real value in each individual scheme that that element will be alone, or at all, preserved by a departmental hash of it and half-a-dozen other, perhaps quite inconsistent, schemes, though each separately capable of being carried to a successful, and perhaps very valuable, conclusion by its own inventor. What I have tried to indicate here in particular relation to buildings I have already hinted at in a less material and tangible sense in my note of 3rd April 1905. Such suggestions, if they are not utterly resented as "revolutionary" (and I personally feel sure that no Western education will be incorporated into Indian life without a revolution from past methods of routine and hum-drum), are apparently open to the objection that it would never do in India to work on lines which depended for their success on the life of, or even on the continued occupation of the same post by one officer. I cannot indeed restrain the hope that some arrangement will shortly be made to obviate the present insecurity of tenure of professorial chairs in Government colleges in Bengal. I am confident that the general outlines of the arrangements which I indicated in my official note as those by which this could be achieved are entirely practicable. If the Government colleges were given a full four months' vacation, I believe no professor who was really interested in his work (which implies that he is allowed enough liberty to develop such an interest) would ever wish to go on furlough, and then only for long periods which would enable him to work up some special development of his subject, or of educational problems; and also allow of a *locum tenens* being brought from England if none of his own subordinates were capable[3] of carrying on the work of his institute. The other disturbing influence, viz., that due to breakdown of health, as I have also pointed out, is likely to be greatly diminished by the said four months' vacation during the most unhealthy part of the year; and the accident of death is liable to happen anywhere and has happened several times within my own experience of science schools being built up by comparatively young men[4]. Such a misfortune is sometimes irreparable, but not necessarily so, if another good man can be got to fill the vacant chair. My point is that a school which is to exert a deep influence on its disciples must have a consistent plan—a "Lehrgeist"—a spirit of its own. A new man coming into charge of such a school, if he does not entirely agree with the plan of his predecessor, will at least be enabled to recognise that there was an intelligible plan, and he will be able to exercise and prove his own ability by grafting his new ideas on to those belonging to the past history of the institute so as to continue its development for good. But what I want to insist on, with all the emphasis at my command, is that the first essential of real education, of the real life of e school, is the *man* who controls it and that he must not be smothered by, or lost in, the official.

The preceding remarks apply generally to all the instructive work of the college. I now proceed to specialise somewhat the requirements of each of the departments.

Arts.—On what may be conveniently grouped together as the Arts side the demands of philosophy, literature, languages, history, political economy and mathematics are generally more humble and on a less expensive scale than those of the natural sciences; but even they would seem entitled to clean and suitably furnished lecture rooms and to their share of a very much expanded library. Such renovation and expansion can be very much better carried out on a new site than by any attempt at patching the present uncomfortable building, though of course the discrepancy between the present accommodation

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[3] His incapacity must, of course, not be forejudged by any colour prejudice, or service rule depending on the particular portion of the globe in which he happend to have obtaind his appointment.

[4] An example of this was the premature death of Clerk Maxwell at the Cavendish Laboratory where the work was carried on by Lord Rayleigh until the right man was found in Professor J. J. Thomson. It is J. J. Thomson, allowed complete freedom of control, and not any extravagant fitting of the Cavendish Laboratory which makes the Cambridge school of chemical physics perhaps the only science school in England which is really envied, and with reason, by German scientists—who are in general allowed so much more freedom in the development of their own institutes, and which attracts students capable of really first-class work from all over the world.

and that required for the efficient carrying out of that side of college work is not at all of the same order of magnitude as what we shall find in the science laboratories.

Astronomy.—In connection with mathematics the claims of astronomy have already been very fully recognised, and the most expensive parts of its outfit can be readily removed without loss or damage to a new site and with the not insignificant gain of a clearer atmosphere to look through.

Physics.—It is when we pass on to physics that we find the greatest deficiency and disorganization owing to its apartments being scattered in a quite chaotic disorder over the college. Its laboratories are also, in themselves, individually almost as unsuitable to their present purpose as it is easily possibly to conceive. They are hopelessly cramped and overcrowded, not only by the large number of students which have to be admitted, but also by the number of often antagonistic functions that they are required to provide for. It would overtax the most inventive genius to make a really satisfactory physical institute on the present site short of pulling down half the present building, and even then the traffic in the street would be a constant source of disturbance to instruments with delicate suspensions, and the very close proximity of the electric trams would always preclude the use of a large and important class of electrical and magnetic apparatus. I feel there is no possibility of ignoring, nor use in attempting to disguise, the fact that a new and properly equipped physical institute including a large lecture theatre will be a very expensive item in the new college. When I say "properly equipped" I think I should make it clear that I am very fully aware of the extravagant evil of filling every corner of a new laboratory at once with all sorts of costly apparatus (as may sometimes be seen in Germany). There is, as a matter of fact, already some excellent apparatus in the physical laboratory. But it is just in some of the staple requirements of physical science that the Presidency College is so deplorably wanting at present (*e.g.*, a well-equipped workshop and a large battery of storage cells). Such things are unfortunately costly, but they are also absolutely necessary.

Chemistry.—I am sorry not to be able fully to share in Mr. Pedler's apparent enthusiasm for our present chemical laboratory in the Presidency College. It is indeed very substantially fitted (in some respects), and perhaps if one had not to try to squeeze at least double the proper complement of students into its inelastic benches, one might have less grounds for grumbling. Our too small chemical lecture rooms are also very inadequate and by no means comfortably equipped. All our rooms suffer from the same congestion of conflicting purposes that I have noted in connection withe the physical department. The chemical wing has, however, the advantage of being a wing with all its component members adjacent; but on the other hand it is certainly the worst wing in the college for disturbance from the streets that run close round two sides of it.

In most German Universities there are now four separate institutes for the different branches of modern chemistry. Probably two is as much as we could at present expect in Calcutta—one specially for physical and inorganic chemistry and the other for organic chemistry. With the approaching development of chemical industries in India, applied chemistry would gradually grow out of organic chemistry, and therefore it might be the most convenient and natural division to juxtapose inorganic with physical chemistry.

Biology.—One hesitates to plunge into the advocacy of the claims of biology for fear of unwittingly assisting a possible injustice to vested interests, but yet in anything approaching to a complete review of what work should be provided for in a new Presidency College one cannot possibly neglect the very great importance of biology. We must keep constantly in mind that our ultimate object is the awakening of India to the progressive spirit and scientific knowledge of the West. For such a stirring up to be more than surface-deep we must look forward to the future extending of it to the masses of the people through their schools. As I shall presently more fully explain, I look upon science as distinctly the most certain and the most powerful instrument of the hoped for awakening. The cost of such a programme will always be one of its most serious drawbacks in the eyes of a properly economical Government keeping a careful hand on the strings of the public purse. Hence it is not without interest to note that elementary biology, and especially botany: can be far more cheaply taught in primary and secondarp schools than chemistry and physics. This will be seen to be especially fortunate when it is further pointed out that biology—or let us say botany for definiteness' sake—has an even greater educational value for children and beginners than the other sciences. Even the stupidest teacher can scarcely avoid printing out the true connection between observation and deduction, between experiment and theory, when he starts on the teaching of biology. Botany further combines all the advantages of a simple nature study, developing a love for and a sympathy with the surrounding world, to say nothing of its technical value to an agricultural people. The new University syllabus is, I understand, going to recognise the importance of botany in the schools by admitting it as a subject in the Entrance Examination. The same remarks apply to physiology on whose teaching in schools the medical profession is insisting at home, and a spread of the knowledge of the laws of health is certainly not less desirable in Bengal than in England.

So there ought if there is to be any material progress, very soon to be a considerable demand for teachers of biology. It is obviously to the advantage of the commonwealth that such teachers should be educated at Presidency College under the best professors available. It is here that biology has a second great advantage. Chemistry and physics can be pursued at any place with facility and advantages which vary inversely as the distance of that place from Cambridge or Berlin, and hence the often recurring difficulty

of the Secretary of State for India in finding suitable professors of these subjects who are willing to come out to India. But the *flora* of England and the *fauna* of Germany are known down to within almost measurable distance of the "ad infinitum" of the "other fleas" that "bite 'em," whereas in these fields India presents an unlimited prairie of practically virgin soil to work in. There are many students[5] of biology—real, enthusiastic workers—who would be delighted at an opportunity of coming out to India, to be able to spend their vacations gathering grasses, or grass-hoppers, among the Himalayas, and these are just the men required to teach young Indian to work up their country's natural resources, and to spread the gospel of work and science to succeeding generations.

Geology.—The claims of geology are, I trust, in no danger of neglect. A knowledge of it is fundamental in all modern teaching of geography which can be made a most invaluable means of training the powers of observation in schools. A gradual dissemination of geological training will also assist the coming development of the mining industry in India.

Psychology.—The suggestion in Dr. Ray's note that a psychological laboratory should be attached to Presidency College raises a question of the most fascinating interest, and really of the most elemental importance. There is, however, some danger of its being brushed aside as not quite "practical" politics.[6] There can be no doubt that there is indeed a rich harvest awaiting the founding of a school of psychology in India. The only question is whether it is a matter of urgency in connection with Presidency College. It should, indeed, logically have come prior to the starting of European education in India at all. There was and is however, something quite charming in our simple British faith in our own good "intentions," even though our policies have been conceived in the most childlike innocence of the science and art of education, and no one shall deny with impunity that we have accomplished much by the mere honesty of our purpose. But it will very soon come to be recognised that mere innocent honesty of purpose can no longer be pleaded as sufficient "extenuating circumstance," and the mordern world will demand that those entrusted with authority and power shall have used every available effort to find out what were really the most promising means of attaining the desired ends. Education is now more or less of a science as well as an "art" and the scientific educationist must be forgiven if he would like to know something fairly definite about his material before he starts to educate it. Hence there is a magnificent field for a special school of psychology in India, and that school would most naturally and properly be attached to a scientific training school for teachers. Such a school is urgently required, even from the most narrowly "practical" point of view, in India, and I think it would not be unnatural for such a school to find its location in Bengal. (I understand there is already an education degree at the Punjab University.) To establish any claim to being really scientific such a school would require a number of chairs of the kindred and allied sciences. and I can well appreciate the reluctance of the Government of Bengal to launch on another big scheme when it has already the Presidency College and the Model College at Ranchi (to say nothing of Dacca and the Engineering College) on its hands. But I think it is not too much to expect that we may be allowed to look forward to such an institution in the not far distant future. It would ultimately and essentially be a self-contained college independent from, though of course correlated with, Presidency College. But as a preparation for that consummation I should like most earnestly to commend to Government the suggestion of founding a psychological laboratory in connection with Presidency College. And I should like again to insist that the most essential part of such a school is its professor, and that therefore the Government of Bengal would be well advised to found a chair of psychology, which would attract some keen worker from Europe—such as there are plenty, for instance, at Cambridge, and doubtless at other British Universities too. It is not as much (or perhaps at

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[5] I think I may take it as universally admitted that the best teachers are themselves students, and in fact they must. and well, continue to be so, just so long as they keep abreast of their subjects. In Germany, and now in England too, professors are judged solely by their capacity for carrying on original research; and this mode of selection is found to serve admirably. One would have thought, *a priori*, that it were possible to let a man learn all that is to be learnt about a subject, and then to train him how to impart that knowledge, put him in a professor's chair, and as soon as started, he would be able to pour forth a perfect flow of wisdom. As a simple matter of experience, the freshest and most inspiring teachers are those who have a living love for their subject, and testify to it by a continuance of the devotion of their student days.

There is another aspect of the question which is really the most important. The claim of science as a subject of education rests entirely upon the value of the *scientific method* which is simply the method of research. Everyone is familiar with the way in which each Arts subject in turn claims to be called a science as soon as its devotees begin to discover that true progress can only be made by a substitution of the investigation of actual facts and first-hand authorities for the arm-chair flights of the literary imagination that used to satisfy even so-called historians. There are, however, still many difficulties in the way of the scientific teaching of arts subjects in India. and perhaps one should be satisfied if it is possible to introduce even a little scientific teaching of science subjects. Up to the present, I am afraid. the trifling attempt that has been made to spread a knowledge of science has been in the old pedagogic way. (Perhaps some of the very slow progress of science in India must be attributed to these utterly faulty methods.) The essential thing is that the next generation of teachers must be trained to observe and investigate nature and natural phenomena for themselves, and having acquired such a real knowledge of science—the scientific method—they will be able to impart it to their pupils, and gradually the natives of India may begin to learn that there is a real substantial world to work for, and not only a grotesque one to dream about. The real value of a scientific training to anyone is not as a catalogue, of useful knowledge, but as a mental discipline inculcating an adaptable habit of mind which is is ready for all the emergencies of modern progressive life.

I want also to advance on behalf of science the claim that it is the most truly international of all the means of education. I shall have to enlarge later on the difficulties of imparting a foreign social culture. There are certainly two ways of teaching Sanskrit and many Indians are prepared to defend their old traditional method. The national varieties of Art and Music are nearly as numerous as the nations. But there is only one physics and one chemistry, and we may boldly teach them without any qualms about hurting national susceptibilities.

[6] I have put the word practical in inverted commas by way, simply, of a mild protest. The "practical" Britisher's sneer at German pedantry fifty years ago threatens to recoil in a very practical form on his own head in the shape of successful commercial competition in spite of Germany's serious natural handicaps.

all, except as a recompense for exile) a matter of salary, as of the other conditions attached to the appoin ment that will constitute its attractiveness to the right sort of man. The important thing is that he should be appointed "Professor of Psychology at Presidency College, Calcutta," and not merely as an official "Jack-of-all-trades." I think it would probably be the wisest policy to appoint the man first and let him be responsible for the designing of his own laboratory and museum. Such a laboratory might begin on a quite small and inexpensive scale, but designed with a special view to future extension as the expansion of the school required it. Professor Küchler has, I think, already mentioned this point as having to be kept carefully in mind with regard to all the plans for the new college. The soundness of the suggestion is obvious, and it is a further argument in favour of building separate institutes, which may be small at first but easily capable of well-adapted additions as these become necessary.

Commercial Classes.—The commercial classes are at present a considerable source of disturbance to the more proper work of Presidency College. When the C course has been thoroughly remodelled and made more business-like, and especially when the fees have been reduced as has been promised, the commercial classes are confidently expected to assume very large proportions. They threaten, in fact, by the mere weight of their numbers literally to squeeze the other students out of the already insufficient space. That is another argument in favour of removing Presidency College, and the new college should I think be relieved of this burden of commercial classes. They cannot be said to have any claims to recognition in a University College. The education they give is little more than a thorough drilling in elementary school-work. These students, paying Rs. 3 a month. are evidently aiming at clerical work and have no use for University education. Their presence would also very naturally be resented by students paying Rs. 12, and aiming at something more ambitious in after-life. If the Calcutta University consents to buying the present buildings of Presidency College, a cheaper class of College might be erected in some central part of the town for the special requirements of a Commercial College. If not, the present building would probably very soon be filled with the new classes.

Development of character.—So far I have dealt almost exclusively with the more purely instructive part of college work, that part which has to do with the training of the intellect. There still remains the more purely moral part of education, that which is directed particularly to developing the character of our students. It is only repeating a truism to say that it is not so much what a man *knows* as what he *is* that constitutes the difference between one man and another. It is character far more than knowledge that makes a man a desirable, and in that sense a useful, citizen, and which makes one nation succeed where another fails.

Character is clearly a factor far too important to be neglected. It has been the uniform policy of the British Government to do nothing which could at all be interpreted as a direct interference with the religious beliefs of its Indian subjects. But there can be no doubt that one of the results of our Western education must in many cases be the shaking of those primitive religious beliefs which have been the pillars of society in Hindustan. It is therefore clearly the duty of Government to do what it can to supply the place of those religious guides to conduct, without of course infringing its declared policy of religious neutrality. I am one of those who believe in the possibility of sound education even on the purely instructive side doing a great deal in this direction. There can be no finer test of moral fibre than the carrying through of a piece of honest intellectual work—the worrying through to solution of a tangled problem in some branch of historical research, or of the scientific investigation of nature. It certainly requires and inculcates orderliness, self-reliance, patience, perseverance and a love of truth. It is just as obvious that the mere mechanical memorising of text-books is only a shallow mimicry of education, whose very motto is dishonesty, commencing with partly unconscious self-deception and ending in a scarcely disguised attempt to cheat the examiner. So that no one who has ever thought seriously about education would be surprised to hear that the University system up till now prevailing in Calcutta had not done anything to encourage sound morals. A strange examiner coming in to interfere with work at frequent intervals can scarcely escape being looked upon as a legitimate enemy—as in fact he is. I do not believe that it was possible for ninety-nine Bengali students out of a hundred to get through such an appalling series of examinations as those to which he had to submit himself without resorting to dishonest means—intellectually dishonest first, and then dishonest in every sense. And if we, the instructors—the prophets come from the West—sanctioned such a system, we must obviously sanction the necessary means, and hence dishonesty itself, by a simple train of logic in the student's mind. There is, however, much hope of, as there is much room for, improvement in this direction at the present juncture of University affairs.

There is then also the other side of educational influence, that which appeals more simply and directly to the sociable instincts of our student community. We can already exercise an influence by the force of our example in matters of work. Still more it is hoped may be exercised in a more intimate intercourse between the teachers and the taught in the relations of daily life apart from and outside the intercourse of the class room and laboratory. In recognition of this the Universities Act has indeed laid it down that all affiliated colleges must make some provision for the residence of a portion of the teaching staff in or near the college. This I think is the most imperative reason for moving Presidency College to a more airy place in the suburbs. It would be quite preposterous to ask the Principal and professors to live near the present site in the middle of the Burra Bazar. And this, even

from the more purely instructive point of view, is a very serious drawback to good work. Every science professor is very largely dependent on his laboratory for the carrying on of original work. It is there that he may set an active example of work to all his students and especially inspire his best students who have obtained recognition from Government by the award of research scholarships. But the climate of Calcutta is such that during a large part of the year it is almost a physical impossibility to do any delicate manipulation except in the cool of the morning and evening. Hence it is specially useful to science teachers to live near their laboratories. This need scarcely have been laboured, as it is very fully recognised that it is greatly to the advantage of the whole life of a college to allow its members to constitute a society living together; and I take it that professors' houses will form an integral part of the new college.[7]

One does not like to appear to throw even a little cold water where so much enthusiasm has been stirred up by the prospect of all that may be accomplished by a more intimate social intercourse between professors and students in the playground and the hostel. The subject has been constantly under discussion in the professors' room at Presidency College since I joined its staff. I think most of those who have had experience in Europe do not share the fear that a professor may lose dignity in the cricket field. But the fear is characteristic and its expression by Indian professors is a trifling reminder of how far points of view and standards of conduct may vary. This variation does become of real importance when we pass into the hostel. I think no one, who has listened to our professorial discussions with at all an open mind, can fail to have been struck by the very wide differences that exist between Indian and European[8] views of the relative and actual importance of different moral rules, and far more of the, perhaps at bottom inessential, but none the less dearly cherished, conventionalities of polite behaviour and good manners. I have not heard any Indian agreeing with Meredith Townsend's dictum that the more the two races are kept at a respectful distance in social intercourse the better for the happiness of both and for the future of the British Empire in India. I may claim to have made very considerable efforts to get on to really intimate terms with some of my Indian colleagues and students (as well as with some old college friends at Cambridge), and have succeeded in maintaining a perfectly frank friendship in a few cases. But even in my short experience, I have been struck by how often slight temporary misunderstandings have arisen on what seemed to me utterly trivial grounds, and I have been assured that I have often given pain when I was evidently least aware of it. In fact I believe the problem is a very much more difficult one than is generally realised. At the same time I feel sure that it would be very wrong to put any restraint on the enthusiasm of those, who believe in doing good in this way. And I think we might all contribute something very real towards the solution of the problem and nothing but ultimate good to the students concerned, provided always that each man is allowed to work along the lines in which he believes, only subject to the mildest direction from a Principal of really elastic imagination.

Conclusion.—I must, for very shame at their already excessive wanderings, bring my remarks to an end, without having at all touched upon many of the interesting topics raised by the speeches and notes which have been circulated. I am confident that a sound decision on these matters will be arrived at by common consent.

In conclusion I need only repeat my emphatic opinion that the proposed reconstruction of Presidency College will afford a splendid opportunity of substantial and permanent

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[7] This fact must also be kept in mind in choosing the new site. I do not think that many of the present professors of Presidency College can be accused of an excessive observance of his so-called "social duties" in Calcutta. At the same time there is no very obvious reason why any particular professor, either present or future, should be debarred from mixing to a certain extent in society outside that of the College. And, I venture to think, that in this respect the case of the European professors does deserve special consideration. They are strangers in a strange land, and must be forgiven if they want occasionally to visit others of their own kith and kin. This, I think, is a perfectly valid argument against planting Presidency College far away to north of Calcutta. I have no intimate knowledge of the particular site suggested, but I gather that it would cost a great deal to prepare the ground.

I regard the south side as practically inevitable, and the suggestion of Kidderpore House is an excellent one in every way, if it can be obtained. It is certainly a healthy position and the tram will bring day students from the heart of Calcutta to within a few yards of its gates and yet not render a whole class of magnetic observations quite impossible. The cost of preparing the ground would probably be far less than that of any of the other sites mentioned. It is well situated with regard to such eminently educational institutions as the Zoological Gardens, the Horticultural Gardens, the Meteorological Observatory, the Indian Museum, the Art Gallery, the Asiatic Society, and even the Botanical Gardens at Sibpur are within twenty minutes by boat. Tolly's Nullah might be made use of for rowing and the Maidan has endless possibilities of exercise and fresh air for students.

[8] I have adopted the broad distinction as sufficient for the purposes of the present note. No one will deny that a Bengali boy or any other Indian is less like an English schoolboy than is a French schoolboy. There has recently been a strong movement in France to encourage more power of initiative and independence of character among the rising generation, by an introduction of the English public school system. "La réforme," writes Gustave La Bon, "théoriquement excellente, serait tout á fait irréalisable. Adaptée aux besoins d'un peuple qui possède certaines qualités héréditaires. comment pourrait-elle convenir à un peuple possédant des qualités tout á fait différentes? L'essai d'ailleurs ne durerait pas trois mois. Un parent français à qui on enverrait du lycée son fils tout seul, sans personne pour lui prendre son ticket à la gare ou le faire monter en omnibus. lui dire de mettre son pardessus quand il fait froid, le surveiller d'un oeil vigilant pour l'empêcher de tomber sous les roues des trains en marche, d'être écrasé dans lese rues par less voitures, ou d'avoir un oeil poehé quand it joue librement a la balle avec ses camarades, ces parents-là n'existent pas en France." Anyone who has been a British boy accustomed to travel alone since he was of twelve years old rubs his eyes. But there it is; and certainly the difficulties of producing such a revolution of character in Bengal are not less than, though evidently very much of the same kind as, in France. Yet, I admit, it does not follow conclusively that we are foredoomed to utter failure in Bengal; but we can assuredly only succeed by a really great and earnest effort, after having throughly convinced ourselves that the object of our endeavour is a right one—in fact the best object possible; and we must be prepared at any time for an outcry in the native press that we are undermining the whole social fabric, as will probably be true. The Bengali student is at present very docile and learns (according to his capacity) whatever we teach him, but there are already signs of the awakening of a national spirit which may at any time burst forth and vehemently resent any interference with their deeply-rooted peculiarties, or "prejudices"—if we are pleased so to call them.

improvement. I agree with Mr. Pedler and Dr. Ray as to the best of the suggested schemes viz., the reconstruction of a complete new college on the best available site. No other alternative is, I think, adequate to the occasion.

I must also repeat that the reorganisation of the teaching staff is of even greater and more vital importance. Our faith in the ultimate victory of education is only an offshoot of the far deeper, inborn faith in freedom, our firm belief that good will ultimately prove itself stronger than evil, and triumph the sooner the more liberty we can allow it. Such a faith cannot flourish in slavery: it cannot be propagated by departmental decree, but only by the free apostles of a real conviction.

The 17th June 1905.

J. A. CUNNINGHAM.

[No. 19.]

[FILE $\frac{4\text{-C}}{35}$.]

No. A., dated Calcutta, the 17th June 1905.

16

From—The HON'BLE MR. F. W. DUKE, I.C.S., Offg. Commissioner of the Presidency Division.

To—The Secretary to the Government of Bengal, General Department.

IN continuation of my confidential letter of 30th ultimo, on the proposed change of site of the Presidency College, I beg to enclose a plan showing four possible sites. I think that marked A, which is the one I described before, is the best.

[No. 20.]

[FILE $\frac{4\text{-C}}{35}$.]

Dated Calcutta, the 22nd June 1905.

16

From—RAI CHUNI LAL BOSE BAHADUR, M.B., F.C.S., Additional Chemical Examiner to the Government of Bengal,

To—The Secretary to the Government of Bengal, General Department.

I HAVE the honour to acknowledge receipt of your Confidential Educational Circular No. 9T.—G., dated Darjeeling, the 17th May 1905, with enclosures, asking for an expression of my opinion regarding the proposed removal of the Presidency College from its present site to somewhere in the suburbs of Calcutta, and in reply I beg to make the following observations.

2. The present situation of the College commands so many advantages that in my opinion it would be most unwise to remove the College elsewhere unless it can be satisfactorily shown that the extension of buildings needed for improved teaching of science, for play-grounds for students, for quarters for Professors, and for hostel accommodation, cannot be effected at the present site. From a careful perusal of the notes submitted by the Principal of the College and by the Director of Public Instruction, Bengal, forming enclosures to your letter, I am not convinced of the necessity of removing the College to the suburbs of Calcutta as recommended by them.

3. There is no doubt that the present accommodation in the College building is not sufficient for making suitable arrangements for the teaching of different branches of science with practical classes which has devolved upon the Presidency College during recent years by the creation of various degrees in science by the Calcutta University. The play-ground attached to the Presidency College also requires extension. The gymnasium attached to the College may be remodelled on new and approved methods, but extensive grounds need not be set apart for such a gymnasium. A suitable piece of land for outdoor games, such as cricket, football, &c., which afford both exercise and recreation and to which our students are more fondly attached than to gymnastics, is certainly wanted, but it need not necessarily be a part of the College compound. To supplement this accommodation in the College compound, the Marcus Square, which is within a stone's throw from the Presidency College, may be utilised for outdoor games by the students of this College; and a suitable piece of ground may be found out in the maidan and set apart for this purpose also.

4. I have already said that I agree with the Principal that better arrangements should be made for the teaching of some branches of science in the Presidency College, but I fail to see why this may not be effected at the present site. The existing buildings may be extended on the piece of land to the west of the College, which should be acquired for this purpose. The number

of students attending or likely to attend in the near future the different science classes (excepting Physics and Chemistry) is not so great as to necessitate the abandonment of the existing College building and making arrangements for the teaching of each branch of science in a separate house on German method as has been recommended by the Principal (*vide* paragraph 8, Principal's letter). In India, in any College other than that devoted to the study of Medicine, a separate biological laboratory on an elaborate scale will, still for a long time to come, be as an ornamental appendage. Likewise, considering the insignificant number of students who take Geology for their special study, a separate building set apart for the teaching of this branch of science is, at present, quite unnecessary. The physical laboratory undoubtedly requires expansion and improved fittings. A separate building should be raised for the location of the new physical laboratory in which provision may also be made for the teaching of Biology and Geology according to the present requirements of the University.

5. The chemical laboratory in the Presidency College is one of the best of its kind, and, in the opinion of very competent authorities, it is no way inferior to the chemical laboratories attached to many of the British Universities. It is the product of a good many years' experience of one of the best Professors of Chemistry in the Presidency College, and Government too has been lavish in their expenditure for its proper equipment. It could hardly be considered an act of economy and utility to demolish all the structure and raise it anew in a different place. It is interesting to note that neither the Principal nor the Director of Public Instruction has any depreciating remarks to make in respect of the chemical laboratory about its insufficient accommodation or defective fittings to teach Chemistry according to recent methods. Then even if an extension is required for this purpose, it may be effected on the present site to which I shall shortly refer. If the present physical laboratory is shifted to a new quarter, a number of rooms will be vacated which may be utilised for the extension of the chemical laboratory. The removal of the College would entail the sacrifice of the large sum spent recently in erecting the Astronomical observatory, while the same may with much less expense be extended and improved as occasion arises.

6. The question of hostel accommodation for the students of the Presidency College has always engaged the careful consideration of Government, and the Eden Hindu Hostel was established some years ago for the benefit of the mufassal students mainly of this College. It has supplied a much felt want and has greatly relieved the anxiety of parents of mufassal students who were otherwise exposed to various dangers and temptations attending residence in private messes in Calcutta, devoid of all responsible control. If the present accommodation in the Eden Hindu Hostel does not appear to be sufficient and requires enlargement, the hostel buildings may be extended by acquiring the pieces of land to its north and the east. The Hindu Hostel is so close to the Presidency College that it may be regarded as in the same compound with the College. In this connection, it has been suggested to convert the Presidency College into a residential College in accordance with the regulations of the University Act of 1904, and to erect houses for the Principal and other Professors of the College on the proposed site of transfer, in order that they might be in greater touch with the students outside the College hours and thus influence their conduct and character.

7. While fully admitting the advantages of a residential College, I do not consider it to be an unmixed good. There is no influence which helps the formation of the character of a boy so powerfully as good home influence. Reverence to parents and other elders, attachment to brothers and sisters, duty towards other relations and towards neighbours, training in religious rites and exercises, &c., are taught nowhere better than in a well-disciplined home under the influence and example of God-fearing parents and guardians; and one must be prepared to see these virtues ill-developed in a young man early removed from all good home control and placed in a residential College. Instances of young men falling into bad habits in residential Colleges are too numerous, and the dormitories of residential Colleges are too often the breeding places of vices and evil practices which have made many young men moral invalids throughout life. The presence of Professors in a residential College

is hardly sufficient to stop the evil. The visits to Indian theatres paid openly and otherwise by students living in hostels have become rather too frequent—an indulgence seldom allowed by parents to their boys living with them. It cannot be otherwise expected in a place where a large number of boys are brought to live together, drawn from all sections of the community (either too advanced or too backward), nurtured under widely different social influences and family traditions, and practically uncontrolled during their residence in the hostel except by the hardly felt presence of the Superintendent.

I would rather stick to the present arrangement of providing hostel accommodation only to mufassal students with facilities for a stricter supervision of their conduct and character, and keeping the College open alike to boarders and day-scholars who live with their parents or guardians in Calcutta and its suburbs. Quarters should be provided for some of the Professors of the College, but all the Professors need not reside within the College compound. Residence in the hostel should be made compulsory in the case of mufassal students only, and optional in the case of students living with their parents or guardians in the town and its suburbs. If this modification as to compulsory residence in the College is adopted, the extra accommodation needed will not be very great, and there will be no occasion to remove the College to the suburbs for want of adequate space.

8. There is another objection to the conversion of the Presidency College into a purely residential College. Many of the brilliant students of this College, as in other Colleges, are sons of middle-class men who somehow or other manage to pay the College fees and other necessary educational expenses of their boys, but it would be difficult for them to pay the hostel charges in addition. It may be pointed out that the boarding of boys in the family is scarcely felt by the parents as an extra item of expenditure.

9. The present situation of the College in my opinion is an exceptionally good one. It holds a central position in the town, equally accessible to students from Bhowanipur, Kidderpore and Ballygunge, as well as from Cossipore and Chitpur, while it is also within easy reach of students coming by the East Indian and Eastern Bengal State Railways. It is situated on a site which may be truly called the educational quarter of the town. The place is associated with the history of the foundation and growth of English education in Bengal for nearly a century and with the hallowed name of David Hare, the pioneer of English education in this part of the country; it is in close proximity (within a mile) to the best missionary and private Colleges of the city and placed practically in the same compound with three Government schools, the University of Calcutta, and the Medical College of Bengal. It is within reach by tramway from all parts of the city and suburbs. If it is removed to Cossipore, as has been suggested by the Principal of the College, the day-scholars both from the city and suburbs will be put to heavy carriage expenses, particularly during the rains, until the tramways are constructed. Moreover, the site selected by the Principal is open to objection on sanitary grounds. The piece of land has for a long period been extensively used for wet cultivation and will necessarily be damp and unhealthy and infected with malaria, from which no parts of the suburbs, particularly those situated on either side of the Barrackpore Trunk Road, are free. Moreover, the close situation of the cattle-mart of Chitpur will always be a danger to the health of the inmates of the new College and Hostel. If after the expenditure of so much money for the establishment of the new College, it so turns out that the place is insanitary on the ground of malaria, the history of the Sibpur Engineering College will simply repeat itself in the case of the new Presidency College.

10. With the prospect of soon opening a residential College at Ranchi, it would hardly be justifiable to shut the Presidency College against day-scholars. Such a step would in my opinion also prejudice the cause of the Ranchi College.

11. It now remains to be seen if the necessary improvements required for the College may not be effected at the present site. The acquisition of 18 bighas of land on the west and south side of the College, referred to in paragraph 3 of the Principal's memorandum, will in my opinion be sufficient for its requirements. Owing to extensive railway works lately carried on in Chitpur

and Cossipore the price of land in that locality has gone up very high, and I do not think that the acquirement of 300 bighas of land there and the building of the new College and Hostel thereon would, when an actual estimate is taken, be more economical than the alternative proposal of remodelling the College on its present site. I would allot the 18 bighas acquired for this purpose in the following manner:—

	Bighas.
(1) New physical laboratory, including Biological and Geological Departments	2
(2) Extension of the present hostel	5
(3) Building of the quarters for the Principal and two Professors	3
(4) Enlargement of the play-ground	8
Total ...	18

12. The Principal appears to hold that the 18 bighas of land above referred to will meet all the requirements of the College, except in the case of the College being converted into a residential one, for he says in the same paragraph that "even if both plots are acquired, the College would not be residential. There is no possibility of ever having a residential College on the present site." I have already noted my objections against the College being converted into a residential one; if it is not made so, then I think the piece of land on the west and south of the College, if acquired, will be found sufficient for the purposes of its enlargement and improvement. The *bustis* which are situated over this piece of land are very insanitary; every year plague breaks out in these *bustis* and causes anxiety to the authorities for the safety of the inmates of the Hindu Hostel. The acquirement of this piece of land for the purposes of the College will immensely improve the sanitation of this part of the town. The Senate at their last meeting appointed a Sub-Committee for the purpose of acquiring a piece of land close to the University Hall to enlarge its accommodation, of which it is in urgent need. If the University decides upon purchasing the unhealthy bazar on its south side which is so dangerously close to the Medical College Hospital, then the whole large plot of land bounded on the north by the Harrison Road, on the east by the College Street, on the west by the Medical College Street and its continuation north, and on the south by the Champatalla 2nd Lane will be entirely occupied by Government School and College buildings and by hospitals and hostels. It will be one of the most healthy and finest quarters in the town of Calcutta.

I beg to summarise my conclusions thus:—

(1) That the idea of removing the Presidency College to some place in the suburbs of Calcutta is unsound on the grounds of economy and convenience, and that it should not be removed from its present site.

(2) That it should not be converted into a wholly residential College, but that it should remain open to day-scholars also.

(3) That the 18 bighas of land on the west and south side of the College, referred to in paragraph 3 of the Principal's memorandum, should be acquired and devoted to the expansion of the College both for teaching and hostel purposes and for the enlargement of the play-ground.

[No. 21.]

Note on the proposed transfer of the Presidency College to the Suburbs. [File 4-C 95.16.]

The old University Act did not contemplate the establishment of residential Colleges, and the Presidency College was not intended to be a residential institution. But there is a hostel attached to it, which provides accommodation for about 280 students, *i.e.*, somewhat more than one-third of the total number (764) attending the College.

2. Apart from providing suitable quarters for students and professors, the present accommodation in respect of class rooms and laboratories in the College falls far short of actual requirements. The deficiencies are outlined in page 2 of Mr. Pedler's note, dated 19th April 1905. Various suggestions have been put forward to remedy them, but before considering them, it is necessary to come to a decision on one important point, viz., whether the Presidency College should be converted into the residential type or it should maintain its character of being mainly non-residential. If the former, then it is obvious that it cannot remain in its present site, but must be removed bodily, as it is impossible to find enough land in the vicinity except at a cost which must be fairly regarded as prohibitive, and there would be no scope left for future expansion.

3. I see no special advantage in removing the College to the suburbs. A very large proportion of the students reside in their own houses and attend as day scholars, and the removal of the College from its present central position in the heart of the Indian quarter would be a source of serious inconvenience to most of them. On the other hand, if residence at the College is insisted on in every case and day scholars are wholly excluded, there is no particular merit in locating the College in the outskirts rather than at a distance.

4. The considerations that should have weight in determining the site of a self-contained residential College are—

(*a*) Open country.
(*b*) Healthy climate.
(*c*) Pleasant environments.
(*d*) Cheap living.
(*e*) Freedom from the distractions and temptations of town life.
(*f*) Room for future expansion.
(*g*) Easy communications.

As regards the suburbs of Calcutta, they have none of the above advantages except (*g*); rather the reverse. Further, the initial cost of land and buildings, though not so high as in the city, would be very heavy.

5. If, therefore, it is decided to make the College residential, the best, cheapest and simplest course would be to transfer it to a place like Ranchi, which has all the advantages referred to above, except in the matter of communication, the want of which should, however, be soon removed.

6. For these reasons the proposal of the Principal that the College should be removed to the suburbs does not commend itself to me. It would be resented by those who attend College from their own houses, and as for those who come from the mufassal, they would much prefer to be in a healthy locality where living is not dear and which is free from the evils of a city life. There is little doubt that if a properly equipped residential College with an efficient staff is opened at Ranchi, the great bulk of the mufassal students will resort to it, and for good reasons.

7. The character of the Presidency College, mainly a non-residential institution, should not be changed, but the present defects in respect of inadequate teaching accommodation should be removed by taking up land in the neighbourhood for the necessary extension and development of the College and for building new and approved science laboratories (Mr. Pedler's B), and if necessary, the hostel accommodation might also be improved and enlarged, though this would hardly be the case, as with a good College at Ranchi, most of the mufassal students who form the majority of the boarders would prefer to go there. I am not aware whether this would meet the requirements of the new University Act in the matter of residence, for if it does not, the question will assume a different aspect, especially in reference to the various private Colleges, upon which no terms could well be imposed that would not be equally applicable to the premier Government College.

8. Nothing should be done to impair the efficiency and high character of the Presidency College. It is the leading educational institution in India and is situated at the main centre of intellectual activity.

There will always be a sufficient number of students recruited from the resident population of Calcutta, who will not require any boarding accommodation. It will continue to be of the type of the University College of the

King's College in London. All want in respect of class rooms and laboratories should be removed, the latter being equipped in the best way possible. At the same time there is ample room in Bengal for another first class Government College which should chiefly be intended for students going into residence. This should also have the best professors and fully provided with science laboratories.

9. I see no reason for the apprehension entertained in some quarters that the establishment of a good College at Ranchi would imperil the status, if not the existence, of the Presidency College. As I have already said, there is ample room for both, and Government should be prepared in the interests of high education to maintain both in a state of efficiency, especially as it is not improbable that some at least of the existing private institutions will disappear owing to their failure to conform to the requirements of the University Act.

The 24th June 1905.

K. G. GUPTA.

[No. 22.]

[FILE 4-0/85 16.]

Dated Calcutta, the 1st July 1905.

From—The REVD. A. B. WANN, B.D., Principal, General Assembly's Institution,
To—The Offg. Secretary to the Government of Bengal, General Department.

IN answer to your confidential Circular No. 9T.—G. of 17th May, I have the honour to submit the following observations.

1. The proposal under consideration is not simply one for removal of the Presidency College to a more suitable site as regards accessibility and facilities for work. It involves—

(*a*) The transformation of the Presidency College into a residential college both for professors and students, with extensive playgrounds, etc.

(*b*) The erection of buildings on a considerably larger scale and with a more complete equipment.

And it also contemplates—

(*c*) A considerable strengthening of the staff.

These involve a heavy initial expenditure, and also a considerable increase in annual expenditure.

2. From an educational point of view the scheme proposed by Dr. Ray and endorsed by Mr. Pedler is very attractive. It provides for full equipment and for advanced teaching and research in all the branches of study. It provides for students being brought under the supervision of and into constant touch with their professors and enabled to combine physical with mental culture. It plants the college in a site where most of the advantages of country life can be gained, while it is within convenient reach of the great industrial establishments with which scientific education is bound to come into increasingly closer relations; and it is accessible from the homes of the many well-to-do families of Calcutta who will prefer that their young men should not go into residence at the college. (I would remark, however, that this last advantage is purchased at the cost of so far sacrificing the residential system.) If, therefore, the care of the Government extended only or even mainly to the students, numbering 750 or thereby, who attend the Presidency College, I should heartily endorse this scheme, without qualification.

3. My difficulty arises when I remember that there are some 8,000 arts students in the province of Bengal, all of whom are objects of concern to Government. Not ten per cent. of them attend the Presidency College. And there are some 50 colleges,—Government, aided, and unaided—all doing work which the Imperial Government recognizes to be its work. If it is right to expend the large sums indicated in Dr. Roy's letter on one college with 750 students, how much should justly be allocated for the remaining 50 colleges and 7,000 students? For many years Government has been pledged to the principle of grants-in-aid and has contemplated the extension and improvement

of education in Bengal mainly by aiding colleges other than purely Government colleges. Is it prepared to increase its grants-in-aid to something commensurate with the very large expenditure contemplated on the Presidency College?

4. It may be objected to this that the Government must maintain at least one "model" college to "set the standard" even though the expense is disproportionately great. But is there not a fallacy here, due to the ambiguity of the word "model" and such phrases as "set the standard"? "Model" may mean "perfect," completely equipped and thoroughly organized, as good as brains and money can make it. But "model" may also mean "set up for imitation," of such a standard as may be at least approximately reached by others. I would respectfully represent that this latter meaning is the meaning involved in the grant-in-aid system, and the recognition, now universal, of the responsibility of Government for the whole condition of education in the country. There should be some reasonable proportion between the amount spent on the "model" college and the amount granted to other colleges, otherwise how can they make it their "model?" Well-qualified teachers, well-equipped laboratories, hostels, and playing-grounds are needful or helpful for all students, and not for ten per cent. only; but without liberal Government aid they are impracticable, and especially so in Calcutta. Without such aid, the carrying out of the proposed change in the Presidency College would mean the establishment of one really first-rate college, and the relegation of all others to a hopelessly second or third-rate position. Such a result cannot be contemplated with equanimity by those interested in other colleges, or, I venture to say, by a Government which takes a full view of its responsibilities in the matter of education.

5. It may still be urged that the Government cannot consent to keep its principal college permanently below the level of a good European college because of the difficulty or impossibility of raising all the colleges in Bengal to that level; that, in short, the Government should have at least one "model" institution in the first sense I have indicated, as good as money and brains can make it. And to this I heartily assent. But I would urge the absolute necessity of concurrently placing the grant-in-aid system on a most liberal basis, unless collegiate education outside the Presidency College is to be degraded in proportion to the raising of the standard of equipment within that college.

6. I would further urge that the fees payable at the remodelled Presidency College should be raised, in consideration of the increased annual expenditure, and of the great initial expenditure. If a first-rate residential college with playing-grounds, &c., is provided, the beneficiaries ought to pay a considerable part of the expense. Otherwise a great gift will be made exclusively to sons of the well-to-do from the taxation which includes the poorest.

7. I would also urge that no special advantages should be held out to scholarship-holders, but that they should have to pay their way like others. It is not simply the desire to continue to have some men of first-rate ability in our own college, but also the conviction that undue concentration of the best men is not in the interests of education, which makes me urge this. In our educational system, with many colleges affiliated to the University, it would be fatal to hopeful and inspiring teaching if one college not only possessed an incomparable equipment, but also drew in all, or nearly all, the best men. To be condemned to teach only the second-rate would be disheartening to the teachers; and to feel that they were studying in a hopelessly inferior college would prevent any *esprit de corps* from arising among students. A healthy spirit of emulation among the affiliated colleges is a great help both to teachers and to students in a University like ours; but if the colleges cannot enter upon competition on something like equal terms, this emulation is impossible.

8. I recognize, however, that in some respects Government must concentrate efforts on one institution, *e.g.*, in promoting research work, in providing for the highest teaching (personally, I should be willing to see all above the B.A. and B.Sc. concentrated), and in affording instruction in those branches of study, both in science and arts, for which only a handful of students offer themselves. It would be unreasonable to expect Government to fritter

away its funds in aiding many institutions to do badly what could be done in one institution well. I have used the word "institution" advisedly; for in my opinion it would be much more satisfactory to do as much as possible on those lines in connection with the University rather than in connection with the Presidency College, so long as that is a college competing with other colleges on nominally the same footing.

I would therefore finally suggest that Government should carefully consider how the large expenditure they are evidently prepared to make may be made helpful to the largest number of students and to the work of the University as a whole.

[No. 23.]

[File 4-C 35 .] 16

Dated Calcutta, the 8th July 1905.

From—Dr. E. Denison Ross, ph.d., Principal, Calcutta Madrasah,
To—The Offg. Secretary to the Government of Bengal, General Department.

I have the honour to acknowledge receipt of your Education Circular No. 9T.—G., dated the 17th May 1905, and of the papers connected therewith, on the subject of the proposal for the removal of the Presidency College to a better site in the suburbs of Calcutta.

There can be no two opinions as to the advantages which would accrue to the institution by the acquisition of more extensive premises, and the question from this aspect has been fully dealt with in the correspondence enclosed with your letter.

If the enlargement of the premises is not practicable in the present site, and it is decided to remove the college, I have only to remark that the site suggested by Dr. P. K. Ray, namely, the Dum-Dum Road, seems to me the most suitable that could be found.

However, the manner in which the removal of the college to the outskirts of the town would affect the students is a question not so easily disposed of, and the following difficulties present themselves to my mind:—

(1) If it is not residential at all, of course it will be of no benefit to students, as, apart from the long distances they will be obliged to journey, they will still be returning to their homes in the evening, and be subjected to all the temptations of a large town.

(2) For the same reasons, if the college is only partly residential, I cannot see how it will attract boys living in Calcutta.

(3) If it is to be wholly residential, will it not seriously endanger the Ranchi scheme? Moreover, will it in any case attract Calcutta students? Will they care to live in a hostel three miles out of town, when they have the alternative of living with their parents or guardians and attending one or other of the private colleges which are so plentiful in Calcutta?

It seems to me that if Presidency College is wholly residential in its new site, it will attract only mufassal students.

But though it is very much to be desired that the best possible conditions of student life be offered to undergraduates coming from distant parts of Bengal, I am under the impression that the Presidency College is primarily intended for the citizens of Calcutta, whose sentiments have been voiced in the speech delivered in the Bengal Council by the Hon'ble Bhupendra Nath Bose.

[No. 24.]

[File 4-C 35 .] 16

Dated Calcutta, the 15th July 1905.

From—Khan Bahadur Seraj-ul-Islam,
To—The Offg. Secretary to the Government of Bengal, General Department.

With reference to your letter No. 9T.—G., dated the 17th May 1905, calling upon me for an expression of my opinion regarding the proposed transfer of the Presidency College to a better site in the suburbs of Calcutta, I beg to submit the following observations.

The tendency of public opinion nowadays seems to be in favour of a residential college with healthy hostels attached, and with extensive recreation grounds, at a distance from the busy bustle of the town and its concomitant evils. The parents and guardians, especially of the mufassal students, are generally afraid of sending their boys to Calcutta for education by reason of the various dangerous attractions and evils to which they might fall victims. I think the present site of the Presidency College is objectionable on various grounds. There seems to be a consensus of opinion as to the desirability of removing it to a better site in the outskirts of Calcutta.

There is no doubt that the Presidency College requires improvement to make it a model college. The question is how to do it. I do not think that the mere extension of the college premises and the addition to it of a better staff will be sufficient to effect the desired improvement. No real improvement can be expected by retaining it in its present site. Unless the college is located elsewhere outside the town, the causes of complaint will not be removed. I am therefore inclined to think that the change of site is essentially necessary. As to the proposal of extending the college premises, I agree with Mr. Pedler in thinking that the cost of acquisition would be almost prohibitive.

In connection with the question of removal, the main point for consideration is a *suitable site*. In considering this question, we ought to keep two points in view. The first is that the place must be a healthy one and the second that it must be within easy reach of the town. Now it is well known that the suburbs of Calcutta are notoriously unhealthy. It is of first importance that a residential college should be located in a healthy site, otherwise the whole scheme will fall through.

The site proposed by Dr. Ray may do in the absence of any better place, provided it is certified by sanitary experts to be a healthy one. Objection may also be raised that it is out of the way. The students residing with their parents and guardians within the town will find it very inconvenient to attend the college. Unless it is made a wholly residential college, most of the day scholars will have to reside in the town. Hence is the necessity of easy communication between the college and the town.

In conclusion, I venture to submit one observation for the consideration of His Honour. I am afraid that the establishment of a residential college close to Calcutta may have the effect of interfering with the success of the Ranchi College. If the parents and guardians of the students find a residential college with hostels and other improvements within easy reach of Calcutta, very few of them will care to send their boys to an out-of-the-way place like Ranchi.

[No. 25.] [File 4-C 35 16.]

Dated Calcutta, the 11th August 1905.

From—Babu Bhupendra Nath Basu,
To—The Secretary to the Government of Bengal, General Department.

I beg to acknowledge receipt of your Circular letter regarding the removal of the Presidency College from its present site.

I recommend the removal on the following grounds:—

(1) The College in order to maintain its position as the leading educational institution in the country must be converted into a residential College.

(2) There must be extensive play grounds and room for long walks where the teachers and the student can associate on friendly terms.

(3) There must be around the College and its buildings an atmosphere of learning and quiet, and the students should live as if in a City of their own under the personal jurisdiction of the College authorities.

(4) The surroundings and the approaches must be free from contaminating and disquieting influences.

(5) All this cannot be secured at the present site: it may be extended at enormous cost, but nevertheless the College with its appurtenant buildings will be placed in the heart of a busy and growing City with its manifold distractions and amidst unhealthy and undesirable surroundings both physical and moral. The boys cannot be placed in a big City like Calcutta with only a

small space set apart for the College under the direct disciplinary jurisdiction of the College authorities.

(6) Under the present system, when the boys are only for a few hours in their class room with their teachers, the personal influence of the teachers is wholly lost: he is too much engrossed in the work of teaching to converse with the boys, to attend to their moral needs, to cultivate their acquaintance or to acquire their confidence. Most of the professors do not and cannot know their boys, and the students on the other hand do not know their professors, except as teaching automatoms. The professors cannot impart to the boys what is best in them, and the highest and best in the character and life of the students remains dormant and undeveloped.

(7) The association of the students with their European professors will lead to the development of greater sympathy, mutual understanding and respect, and will be politically a source of great advantage and strength to the country, the rulers and the ruled alike.

I come now to the question of site.

So long as the site is easily accessible for day scholars, it does not much matter whether the site is at Ballygunge or Tolla. The latter site will undoubtedly be much healthier: it has the advantage of proximity to the river and the canal, and is intersected by the Barrackpore Trunk Road, one of the best roads in Bengal for a walk, ride or drive. Moreover, most of the students of the Presidency College who live in Calcutta come from the northern portion of the town, and to them Tolla would be a near and convenient site. With the extension of the tramway, which is under contemplation, all difficulties of communication will be removed.

B. S. Press—23.10.1906—27836—300—E. J. H

[No. 26.] [File $\frac{4\text{-}C}{16}$.]

GENERAL DEPARTMENT.

EDUCATION.

Dated Calcutta, the 13th November 1906.

RESOLUTION No. 2624.

Read—

Circular No. 9T.—G., dated the 17th May 1905, and the replies thereto.

In April 1905, in the course of the debate in Council on the budget for the year 1905-1906, the Hon'ble Babu Bhupendra Nath Basu referred to the fears which had been entertained in some quarters that, in view of the new College which it was proposed to establish at Ranchi, the interests of the Presidency College might be neglected, and that the latter institution might ultimately cease to exist. He referred to the assurance which had been given by Sir Andrew Fraser that there was no intention on the part of the Government to do away with the Presidency College, and he appealed to the Government to strengthen the College and widen its sphere of usefulness. In the course of his remarks, he drew a picture of a resuscitated Presidency College, the realisation of which would involve the removal of the Presidency College from its present site in the heart of Calcutta to a site somewhere in the suburbs where ample space would be available. In summing up the debate Sir Andrew Fraser touched upon this subject. He recognised that in the case of the Presidency College very considerable improvement was required in regard to the important matters of accommodation for the students and bringing them more into contact with their Professors, and he promised to consider, in consultation with his official advisers and others interested in higher education, what steps should be taken to secure such improvement.

2. Accordingly, in May 1905, a circular letter was addressed to a number of prominent persons, official and non-official, inviting them to favour the Government with an expression of their opinion on the proposal for the removal of the Presidency College to a better site in the suburbs of Calcutta. The replies received to this letter disclosed a considerable variety of opinion. Officers of the Educational Department were generally in favour of the removal of the College, while of the other gentlemen consulted, some were for, and others against, removal. Those who prefer the present site attach importance to the traditions with which it is associated and to its accessibility in the case of those students who live in Calcutta with their parents and guardians, and who are perhaps unable to afford the expense of living at a hostel. They represent that if the College be removed to a place outside Calcutta, the expense of conveyance to and from the College might prove burdensome in some cases. On the other hand, those who would prefer a new site in the suburbs point to the necessity of room for expansion and to the other advantages which might be secured in the shape of closer contact between the teachers and taught, more commodious buildings, extensive play-grounds in close proximity, a better moral atmosphere, and more healthy surroundings.

3. Estimates have been prepared of the cost of improving the College *in situ* and of transferring it to a new site. The cost of each of the two schemes which have been sketched for this purpose is nearly the same and approximates to twenty lakhs of rupees. But it will be understood that the estimates claim to be no more than rough estimates of comparative cost. In respect to the cost of removal, the value of the land now occupied and the buildings upon it, have been taken into account.

4. Before any scheme of improvement can be laid before the Government of India, it is desirable that the question of the future location of the College should be subjected to a more extended examination. The Lieutenant-Governor is unwilling to take any further steps in the matter until he is more fully

informed as to the trend of public opinion on this question, and as to the reasons for any difference there may be between the views prevalent in the metropolis and those which find acceptance in the districts. The present Resolution therefore has been recorded in order to give a wider publicity to the discussion and to ascertain, so far as possible, the state of public feeling on the subject both in Calcutta and in the *mufassal*. The Resolution will be published in the *Calcutta Gazette* and copies will be forwarded to public bodies and Associations, who will be invited to favour the Lieutenant-Governor with their opinions. His Honour will also be glad to consider communications addressed to the Government by persons interested in the future of the Presidency College.

ORDERED, that the Resolution and the papers referred to in the preamble be published in the *Calcutta Gazette*, and that copies be forwarded to public bodies and Associations with a request that they will be so good as to favour the Lieutenant-Governor with an expression of their opinion on the question whether the Presidency College should be transferred from its present site to a site in the suburbs of Calcutta.

By order of the Lieutenant-Governor of Bengal,

T. W. RICHARDSON,
Offg. Secy. to the Govt. of Bengal.

[No. 27.]

[FILE $\frac{4\text{-C}}{16}$ 22.]

Nos. 91-100, dated Calcutta, the 22nd January 1907.

From—W. S. MILNE, ESQ., Under-Secy. to the Govt. of Bengal, General Dept.,
To—The Secretary, British Indian Association, Indian Association, National Muhammadan Association, Muhammadan Literary Society, Bihar Land-holder's Association, Bhagalpur Land-holder's Association, Bengal National Chamber of Commerce, Bengal Land-holder's Association, Muhammadan Defence Association, and Orissa Association.

I AM directed to forward the accompanying copy of a Resolution, No. 2624, dated the 13th November 1906, regarding the Presidency College and to request that you will be so good as to favour Government with an expression of the opinion of your $\frac{\text{Association}}{\text{Society}}{\text{Chamber}}$ on the question whether the College should or should not be transferred from its present site to a site in the suburbs of Calcutta.

B. S. Press—28-1-1907—35629—62—J. A. M.