


## THE PRESIDENCY COLLEGE MAGAZINE

## CONTENTS



Vol. XX
SEPTEMBER, 1933
No. 1

## THE PRESIDENCY COLLEGE REGISTER

Must be on the shelves of every Old Boy
It will be a reminder of the days of College life

It will revivify old memorics of Association

## THE REGISTER CONTAINS:

(a) A history of the Presidency College and of (its predecessor) the Llindu College, and a list of the stafl of these Colleges ;
(b) A register of ex-students who graduated between 1858 and 1925 , with details of their career where available ;

# (c) A supplementary list of distinguished ex-students of the Hindu Collegre. 

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## THE

## PRESIDENCY COLLEGE ASSOCIATION

A meeting of past stadents and past and prosent members of the staff of Presidency College was huld in the College under the chairmanship of Principal B. M. Sen, on the loth January, Igst, and it was unanimously decided to start an Association of past students and past and present members of the College.

A Provisional Committee with Mr. S. M. Mallik and Prof. P. C. Mahalanobis as Secretaries was appointed to take necessary steps for organising tur. Association.

A second meeting was held in the College on the Ioth April, 1934, under the chairmanship of Mr. Basanta Kumar Bose, M.A., B.L., 'the seniormost ex-student of the College. Draft Rules prepared by the Provisional Committee were considered, and the Provisional Committee was authorized to enrol members. The Inaugural Meeting of the Association will be held after not less than fifty members have been enrolled.

ALL PAST STUDENTS AND PAST AND PRESENT MEMBERS OF THE STAFF ARE CORDIALLY INVITED TO JOIN.

Life Membership Fee.
Rs. $15 /$ - in one instalment, or Rs. $20 /$ - in four instalments of Rs. 5/- each.

Membership forms and information regardin: the Association may be obtained from Prof. P. C. Mahalanobis, Presidency College, Calcutta.

## FOREWORD

WITH the present issue, the College Magazine enters on the twentieth year of its life. It will, I feel sure, be generally and ungrudgingly acknowledged that the Magazine has rendered valuable services towards the promotion of the corporate life of the College which is as indefinable and as essential for growth as life itself. I am glad that the Editor has been able to secure a message from Sir J. C. Bose, Emeritus Professor of the College, which cannot but inspire the present generation of teachers and students, and stimulate them to $\mathrm{a} \cdot$ greater effort towards the ideal which the distinguished scientist has so nobly held up in his own life.

Following 'the usual practice, I take this opportunity of recalling the ideals which the College stands for. Though academic success certainly fills a very large place in our minds, I am asure we all realise that it falls far below the ideal which can be expressed in the two words-education and character. The former, of course, stands for a good deal more than instruction or academic success. It may perhaps help to give us the proper perspective if we remember that we study subjects and not mere books. In the moulding of the character there is one trait on which I lay special emphasis and which makes all the difference in the world between the object and the achievement-'grit.' Complaints are often heard that our boys are losing this very important side of their character, and I trust they will belie these apprehensions.

I must not close this very brief foreword without bringing home to our new students the necessity for the improvement of their physique. The College offers almost unique opportunities for physical culture in Calcutta, and I would urge on the boys the necessity for laying by a store of health by the proper use of these facilities.
B. M. S.


## NOTES AND NEWS

WITH the publication of this issue, the Magazine enters upon the twentieth year of its existence. Times were not, as they cannot be, uniformly even through these nineteen long years, and the usual ups and downs of life were not absent in the case of this Magazine also; it too had its lean seasons of depleted funds and paucity of contributions, as well as its bright and prosperous summer, when funds were plenty and contributors, able and willing, were always forthcoming. But never even for once, has it failed to enjoy the unique distinction of being the worthy mouthpiece of the premier college of Bengal, and for the matter of that, of India. So, when the solemn trust of conducting this journal, fell on the shoulders of the present editor, he accepted it, in spite of diffidence and shortcomings on his part, of which none could be more conscious than his own self, relying entirely on the earnest hope that the gentlemen of the staff as well as his fellow-students would not deny him that ready support and willing co-operation which were ungrudgingly extended to everyone of his predecessors in office, and without which no editor, not to speak of a student-editor, can hope to make his paper a success.

One of the pleasantest functions that every editor is called upon to perform in the opening issue of the Magazine is to extend a warm and hearty welcome to the 'freshers' who add one more batch to the ever-widening brotherhood known as Presidency College. For them a new chapter has opened in life's history, a chapter in which they will have to mould their future. We wish them all success during
their career here, and remind them that theirs is a heavy respon-sibility-not only to live up to and carry forward the ideals and traditions which the magic name of this College connote, but also to add by their own achievements to the glory of the name of their alma mater to whom, as to a mother, they have come for intellectual nourishment and nurture.

We have the proud privilege of publishing in this issue a message, specially written for the Magazine, from our illustrious Emeritus Professor, Sir J. C. Bose. Our heart swells with pride to remember that his supreme $\operatorname{sad} d h a n \hat{a}$ to lift the veil that hides the face of Nature and her mysteries was first started in the laboratories of this College fifty years ago. It is remarkable to note that discipline in life is, to this great Achârya, the first condition necessary for the acquirement of knowledge. 'The most irresistible force is that which is, held in restraint and husbanded for the realisation of your great ideal in life.' It is not by living a life of 'ignoble ease' but by 'going forward in life's great adventure' that we get our true happiness. His message is instinct with the experience of his own life. 'When you have gained the vision of a purpose to which you can and must dedicate yourself wholly, then the closed doors shall be opened unto you.' No greater truth can a pupil learn from his guru. With bowed heads we acknowledge our gratitude to our old professor who lectures to us yet from his own mysterious " workshop" and whose life and work are perennial sources of instruction to his countrymen, young and old.

Every time that the Magazine is published we have the melancholy duty to mourn with a heavy heart the loss of some of our distinguished ex-students ; and this time too is no exception to this general rule. Bengal is distinctly the poorer to-day by the passing away, in the prime of life, of one of the most gallant and faithful sons that she has, in recent times, produced. In the late Jatindra Mohan SenGUpta, the country has lost a political martyr who considered no suffering too much, no sacrifice too great, for the realisation of his political ideal; he was a sincere and patriotic man, a clean and generous fighter, who identified himself completely with the common people whom he nobly championed with the zeal and energy of a

Roman tribune. A true follower of the philosophy of non-violence, he fully justified his leadership of the Congress Party in Bengal which position he held ever since the death of the Deshabandhu. As the First Citizen of this great metropolis of ours, he was responsible for many of the improvements in the city, which was the main scene of his manifold activities. He was a sportsman through and throughas in the tennis court in the wielding of his racket, so in the law-court in the management of his brief, he displayed a cool head and a nice adroitness ; and, most difficult of all, in the Council Chamber and on public platforms he could conduct himself through the most exciting of political tussles without the least bitterness, or communal or racial bias in a manner which elicited the respect and admiration of even his fiercest political opponents. But, above all, it was his sincerity of purpose and the gentleness of his nature, which revealed his greatness as a man and endeared him to all who came in contact with him. Bengal has seen greater leaders in Surendra Nath Banerjea or Chittaranjan Das, but Jatindra Mohan's name will be included in the country's roll of honour along with theirs for his devotion to duty, his noble and selfforgetting sacrifice for the sake of his nobler ideals. Like the Happy Warrior, he drew his last breath in confidence of Heaven's applause. To count him as one of the Old Boys of our College is no little consolation and pride to every one of us even in the midst of the countrywide sorrow at his loss, which we share in common with others.

In the death of Sir Bepin Krishna Bose, at the ripe old age of 82 , we have lost perhaps the oldest of our living ex-students. He was a student here for five years from 1867 to 1872 , when he took his B. L. degree. Soon after, he became the leading lawyer of Nagpur, and was made the Government Advocate. He was also a nominated member of the Imperial Legislative Council, and, later on, of the reformed C. P. Council, in which he was a prominent figure. But it was in the field of education that his name will be specially remembered, and he, more than any one else, was responsible for the spread of higher education in the Central Provinces. His crowning achievement was the foundation of the Nagpur University of which he was the first ViceChancellor. Sir Bepin Krishna was one of those great Bengalees whom Bengal sent out to earn fame and honour in the service of other provinces and thereby add to her own greatness.

Of the younger generation, we have to include in this mournful obituary list the names of some of those whose connexion with the College was not yet over. Sj. Phani Bhusan Chatterjea, who passed out from the College only the other day, had all along a very brilliant career. His activities here are mainly remembered in connexion with the foundation of the Bankim-Sarat Samity, of which he was the most prominent worker, and for some time the Secretary. SJ. Dilip Sanyal of the Fourth Year Class, who met his death under the most tragic circumstances, was a youngman with good parts. Lastly, Sj. Jitendra Narayan Ray of the Second Year Class had already, during his brief career here, become a very popular figure in his class, and had shown signs of a future full of promise. We offer our sincerest condolences to the friends and relations of 1
May their souls rest in peace!

There have been a number of 'shuffings' in the staff since our last issue. Prof. Manjugopal Bhattacharyya, who was for many years a Professor of English here, was transferred bcfore the Summer Vacation to Krishnagar. In the Sanskrit Department, during the absence on leave of Prof. Nilmani Chakravarti, we were glad to get as a temporary lecturer, Sj. Asokenath Bhattacharyya, who was a brilliant ex-student of our College. Prof. N. C. Ghose, the Senior Professor of Mathematics, has gone on long leave for reasons of health ; we wish him a speedy recovery and return to his duties. Dr. Mahendranath Sarkar from Sanskrit College has joined the Philosophy staff. We welcome Dr. Sarkar, whose reputation as a sound scholar and a painstaking teacher, and above all, a kind and good man, has preceded him.

Hardly had the College settled down after the opening of the new session, when we had to bid farewell to our revered professor, Pandit Harihar Vidyabhusan, who has retired from service. Pandit Vidyabhusan spent almost the whole of his career as a teacher in this College, with which his connexion extended well over twenty-five years. To everyone, colleague or student, who came in contact with him, he appeared to be a man of the most genial and lovable nature, a man whose very face indicated the unsophisticated simplicity and
tenderness of heart. We respectfully wish him a long and happy life so that he may enjoy uninterruptedly the well-earned rest to which he must needs have been looking forward.

This year our students did not fare as well in the University Examinations as we have a right to expect of them. In the Intermediate, we had to surrender the top places in both Arts and Science after many years, though in the latter we have secured four places out of the first ten. In the B. A., and B. Sc., however, things have not been so bad. We have captured the largest number of First Classes that has gone to the lot of any College, while in Economics, History, Mathematics (both in Arts and Science), Physics, Botany, Zoology and Geology, the first places have come to us. Though this is a record of which any other College may well be prond, we believe that judging by our own standard, we cannot afford to be flattered about it.

When speaking about the examination results, we are naturally reminded of the unpalatable truth that Presidency College is deteriorating from day to day. No statistics is needed to confirm this assertion, but it will not be out of place to diagnose its causes. It is popularly supposed that this deplorable state of affairs is mainly due to the gradual weakening of the staff. There is certainly no denying the fact that the College misses to-day some of the great names who have shed lustre on it and added to its glory and greatness. The days of Tawney and Mann, Rowe and Webb, Percival and Manomohan Ghose, Sutcliffe and Pedler, James and P. K. Ray, B. V. Gupta and Benoyendra Nath Sen, J. C. Bose and P. C. Ray are surely no more. In recent times, not infrequently demand has been made on our staff for the supply, at a great cost to ourselves, of Principals to other Government Colleges. Notwithstanding these handicaps, it will be a very modest claim to say that we have still the best and the most efficient staff among the Colleges of Bengal. But it is not always good professors who can turn out brilliant students; on the contrary, the reputation of a teacher depends to a large extent on the success of his pupils. Every year, the number of 'scholars' in the College is dwindling. The comparatively
poor demand for admission to the different classes, which in the pas amounted to a regular competition among the candidates, may thus be attributed not so much to the condition of the staff, as to the highrate of tuition-fees. The rate has become so exorbitant as to be almost prohibitive, even for the middle-class well-to-do people, and few can comfortably afford to spend so much for the education of their children. Cases are frequent where a candidate's qualifications permit him to come here, but his means do not. There is nothing more unfortunate than this. It is the cherished dream of many a student even to-day to enter this great institution, but that privilege is rapidly becoming the preserved monopoly of the rich. The Students' Aid Fund, which owes its success to the unwearied efforts of our present Principal, is certainly a great help in this direction and deserves the highest praise. But a few stipends and occasional help cannot remedy the evil. We have cried ourselves hoarse in asking for a revision of the scale of fees, but the authorities have turned a deaf ear to all our appeals up till now. We should like, however, to repeat it once more, though we are not unaware of the difficulty of the situation, regard being had to the present financial stringency everywhere.

The constitution of the College Athletic Club has recently undergone a thorough 'overhauling,' and happily this marks the close of a long controversy which at times bade fair to make the relation between the players and the general body of students bitter and unpleasant. The new constitution distributes the five important port-folios-Football, Cricket, Tennis, Hockey and Basketball-to five professors, to be nominated by the Principal. Under each of them, there will be a Captain and a Secretary for the respective games, to be elected by the previous year's players along with the representatives from the different classes. The new constitution is already at work, and we wish to see it fulfil the hopes it has inspired, and remedy the defects which crept into the old one. In football, our team has already proved its mettle. We went as far as the semi-final zone in the Elliot Shield Tournament and would have gone still further but for some unavoidable circumstances, which stood in our way. We also congratulate here our Ping-Pong team for winning the All-Bengal Inter-Collegiate Table-Tennis Tournament.

Along with a remodelled Athletic Club we hope to see very soon a revived College Union. Proposals have already been made to lift the ban under which it was closed, and we are glad to note that our Principal too realises the necessity for such an institution. The extraacademic activities in a College are of no less importance than the work done in the class-room, for the one supplements the other in the making of an educated man, and it is this which emphasises the need for a College Union. The Bengali Literary Society with the Principal as its President, has already reopened its doors after a long time. And we venture to prophesy that the recent appointment of a Secretary is a clear indication that the College Union will soon come to life again.

This year's Birthday Honours list saw two more additions to the 'order' of Presidency College Knights. The foremost specialist in a very important branch of medical science, Dr. Kedar Nath Das has long deserved the honour now conferred on him. We are proud to note here that he was for sometime the Professor of Sanitary Science in this College. Our respectful congratulations to the venerable medical Knight. We convey our felicitations also to 'the youngest Knight of the Province,' Lt. Bijoy Prasad Sinha Roy, an alumnus of this College, who is a familiar figure in the public life of Bengal to-day.

Yet another attempt was made this summer to reach the summit of Mount Everest, and once more the mountain has triumphed over man. The Ruttledge Expedition was carefully organised and planned in the light of experiences gathered in the previous attempts, while the wireless link, which was a novel feature of the present expedition, kept it constantly in touch with the world far below. But this time too the climbers had to turn back when within a few hundred feet of the actual summit. It was indeed a "glorious failure," and its achievements may inspire another attempt, although none knows whether Shiva and Parvati will ever allow the mortals to storm their closely-guarded abode!

It is, however, gratifying to learn that mountaineering has attracted the attention of the Indians themselves. This year an expedition, composed entirely of Indians, went as far as the Pindari Glacier
where interesting experiments and researches were carried out by them. In this connection, we owe it to the memory of our late lamented Professor of Geology, Dr. Hem Chandra Das Gupta, to mention that he organised and led a small expedition consisting of his pupils to the Glacier a few years back. So, strictly speaking, to Prof. Das Gupta should be given the honour due to a pionecr.

In the domain of world-politics, history is being made and unmade almost daily. The shattered condition of the Post-War Germany had turned it into a hotbed of anarchical bacilli, which helped the growth of innumerable political groups, while the legacy of 1919 has been responsible for its chronic economic instability. It is therefore natural that Herr Hitler's phenomenal rise to power should be met with so little opposition within the country. The Nazi regime is still looked askance by politicians all over the world as another Reign of Terror. The organised persecution of the Jews, the wholesale drive of the Communists from German border and other violent activities of the Brown Shirts have few parallels in modern history. But if Hitler can give stability and order which Germany, of all nations, needs most to-day, then even this new revival of the policy of 'blood and iron will be justified.

Chaos and exhaustion are the prevailing order not in Germany alone, but also in other parts of the world, and what is more threatening is that they look as if they have come to stay. Everywhere the same woeful tale of distress and despair is being repeated. Loyalty to existing institutions and conventions is gradually waning. Democracy, the petchild of the nineteenth century, has in many places received the order to quit. And in the work of rehabilitation, dictatorship seems to be the only panacea. Kemal Pasha, Mussolini, Stalin, Hitler, De Valera, and, close at hand, Gandhi, crop up everywhere with their messages of and prescriptions for deliverance. Even the National Government in England to-day has been vested with powers that a close oligarchy do not always enjoy. Across the Atlantic, Roosevelt sits at the White House with a new programme in hand. But how can they lead us on to the promised land if we fail to cast off our age-old ideas? Nationalism still
sits heavy on our shoulders like the malignant old man of the sea, clogging our movements towards new and better things. Patriotism, which was so long extolled as a great virtue, is now greatly discounted as the bane of world-peace and co-operation. Since its inception, the League of Nations has proved to be the greatest farce in history, only because we cannot yet conceive ourselves except as individuals belonging to different nations. The threat of a world-wide economic dislocation, of the dangerous possibilities of another war, or of the destruction of humanity itself, cannot make us wise. Conferences meet and discuss and disperse, delegates arrive and depart, but the problems remain as far away from solution as when they were first taken up.

The failure of the World-Economic Conference thus came as a matter of course. Pessimism dogged it at every step, and its doom was sealed as soon as the enthusiasm of the first few days had cooled down. Trade batriers, monetary adjustment and war debts are the three important rocks on which the Conference foundered. Every nation scrambled for its own share of the pie and would not forego a penny as a contribution towards that international co-operation, whose panegyric they all sing.' The remark of a famous athlete that sixty nations competing in the Olympic Games got along far better at Los Angeles than the sixty-five seem able to do at the Kensington Museum, exposes the futility, if not the hollow insincerity, of such discusssions. Nations have proved themselves bankrupt in statesmanship, and unless there appears some world-figure who can teach plainly that man has no alternative but to live in harmony with his fellow-men, the present civilisation with all its wonderful achievements is sure to be found wanting and ultimately collapse.

The affairs near at home have been characterised by constant drift and uncertainty. The situation is taking sudden and dramatic turns, but it is doubtful that they will leave behind any far-reaching impression. The movements of Mahatma Gandhi himself for the last six months are difficult to follow. First comes his momentous fast when all eyes were turned to the "Parnakuti" at Poona; next the informal conference of the Congress leaders, the Mahatma's corespondence with the Viceroy, his unexpected decision to continue the Civil Disobedience

Movement, the disbandment of the Ashram, his arrest, detention, release, re-arrest, trial and conviction-all crowded into a fortnight; and lastly, came the beginning of his second fast unto death to secure facilities for Harijan work from within the jail, and his ultimate release. Perhaps by the time the Magazine reaches our readers, the Mahatma will embark on some new venture, utterly unpredictable. On the other hand, the constitution-makers in England are proceeding with their work with remarkable caution and perseverance. The first half of the Joint Parliamentary Committee's work has been finished which was mainly occupied with the examination of evidences submitted by a variety of communities and interests of the most diverse type. Thus the course of Indian politics, like a series of shifting scenes, presents confusion and bewilderment to the most careful observer. Let us hope that the country will soon be relieved from this atmosphere of hopeless suspense and distrust.

As we go to the Press, there comes the sad news of the death of one of the most eminent personalities in British politics, Viscount Grey of Fallodon. For eleven momentous years, from 1905 to 1916, he was Secretary of State for Foreign Affairs, a record which was not equalled by any of his predecessors ; and thus he epitomised in his life, the history of British foreign policy during one of its most active and critical periods. As an earnest lover of peace, he always stood for mutual good-will among nations, and on the eve of the Great War, he worked desperately till the last moments, to prevent a clash between the powers. But when he once realised that Germany was determined to have her own way, he did not hesitate to lead his own nation to action. When in 1916, the premiership changed hands from Asquith to Llyod George, his failing health coupled with his dislike for the new Liberal leader compelled Grey to leave office, and thereby retire almost for good from active politics. But to him the charm of rural England with her flowers, birds and dry fly fishing gave greater pleasure than an important debate at St. Stephens. In character and ability, he towered far above the later Victorians and Gladstone knew him too well to say: " I have never known a youngman with more aptitude for politics and less inclination."


JATINDRAMOHAN SEN GUPTA.
U. Ray \& Sons, Calcotta

## THIS GOD OF EXPERTISM

Nabagopal Das, i.c.s.-Ex-student.

THE problems of the modern world, we are told, are far too complex and heterogeneous to be solved by simple and rough-and-ready methods. Whenever we are perplexed by some mysterious force, social, economic or psychic, we seek to explain it by a meticulous analysis of a formidable array of underlying factors which are too sacred and intricate to bear the introspection of the average mind. Technical knowledge and special experience, assert our modern priests of the deity of expertism, are needed to explore the mystic beauty of things that transcend ordinary imagination and common sense.

This insistence upon expert knowledge and special experience is understandable in spheres which are manifestly abstruse and complex. We can understand Einstein's impatience with people who venture to intrude into the sacred realm of Relativity ; we can appreciate Prof. Piccard's eloquent emphasis on the need for a balloon flight in order to probe into the mysteries of the stratosphere; and we can even tolerate Josef Von Stemberg's "family-quarrel" with the talented Marlene over the niceties of film technique and the correct interpretation of action and art in a movie. But when young Hitler says that the mysteries of the Germanic ideal are not understandable to anybody who has not got the pure Teutonic blood in him, or old and hoary "L.-G." asserts that the economic and political troubles of modern England can be cured only by his expert planning and reconstruction, are we not justified in feeling a bit suspicious?

It is in the economic sphere that this dogma of expertism has caused the worst havoc. We all know that everything is not all right with the world, but how rarely do we try to look at things from the standpoint of broad commonsense and large humanity? While industries are stagnating and the poor masses starving, our experts are fighting amongst themselves over meticulous differences of opinion. There is no end of theories and philosophies in the economic world to-day: Keynes speaks of underinvestment, Hayek retorts with inelasti-

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city of the structure of production, and Hobson and Cole allude to the fundamental evils of underconsumption. And while economists engage themselves in this ridiculous bear-fight, our politicians fare no better. Each one of them is a victim of expertism ; and as these august people come to occupy the front Treasury Benches they intensify their adorations of the deity. The result is that they feel it a puritanical duty to look askance on solutions that smack of simple commonsense. They all want to be dictators in their spheres, but unfortunately for mankind, they lack those qualities of broad statesmanship which are essential to any successful dictatorship!

Does not this worship of expertism look rather like an attempt to seek a short-cut solution of our economic and sacial ills? If only people would look with a wider vision and think less in terms of their own scientific and technical prejudices! . . . Perhaps they will-one day. But on the portals of the path of humanity may be written the words " Too late!"

## MARPESSA

## Purnendu Kumar Das-Fourth Year, Arts.

"SAINT Bernard" growls at hypocrisy in society, Dickens laughs at it, Thackeray satirises that particular form of it, called 'snobbery.' It is all very well. But what about the hypocrisy or snobbery in literature? It has an existence " too too solid." An admiring crowd met every night at Dryden's coffee-house to clap and nod at every word that might escape his lips. Yes; at every tiny bit, be it ever so trifle and trite. And so with all literary giants. Their petty commonplaces and absurd nonsenses are vyingly praised and their faults are carefully ignored-nay, often ludicrously extolled! What a contrast, with the writers, less fortunate in talents and fame. Their defects are mercilessly laid bare; often unjustly exaggerated. Andpoor fellows-their real merits are frequently passed by with a slight nod. That is all. This is, of course, not snobbery. It is-what is it? Be it as it may, many a poet has suffered from its tyranny. And one of them is Stephen Phillips.

A humble book of poems caused much stir and sensation during the nineties of the last century. Those momentous years when the music of Tennyson had melted in the rising melody of Swinburne; when modern poetry was feeling its way in the first flush of dawn, as it were, with Hardy and Kipling, Masefield and Yeats. Four Oxford undergraduates published, in 1890 , a collection of some of their poems, called Primavera. These young aspirants were Stephen Phillips, Manomohan Ghosh, Lawrence Binyon and Arthur Cripps. Primavera was warmly received by Oscar Wilde and Addington Symonds, the great critics of the day. The influence of Tennyson and Swinburne might be seen on the form of the poems. But, in spirit, the poets had closer kinship with the Elizabethans and the Romantics. They found their inspiration in the classic past rather than in the materialistic present. None of Phillips' four poems, however, is remarkable as poetry.

It was with Eremus (1894) that he first came into prominence. Despite its metrical shortcomings and faulty construction it revealed a
true poetic imagination and a power to write fluent and easy blank verse. It drew applause from such critics as Stopford Brooke and Addington Symonds. But in 'Christ in Hades,' his next long poem, he lapsed into a rather irregular blank verse. However, he displayed in 'Marpessa' a consummate skill of versification-the fulfilment of the promise in Eremus. Commenting on 'Marpessa' a critic writes, " In variation of stress and rhythm, in harmonious and ready flow of the lines, in the form of his sentences, he succeeded in using his blank verse with a real knowledge and power." Indecd the blank rerse of the poem is throughout flexible, melodious and sonorous and has a splendid metrical effect.

Pocms (1897) included, besides 'Marpessa' and 'Christ in Hades,' the two long London poems, 'The Woman with a Dead Soul' and 'The Wife,' and also some beautiful lyrics. 'Christ in Hlades' is Phillips' second best long poem and exhibits the stretch and orişinality of his imagination. Of the London poems, the first elicits mingled praise and blame; but the latter is repelling with its sordid realism. Yet, this very poet could transform a London night into a mystical moon-lit meadow and a London traffice-coustable into an inspired bandmaster!

Like Pooms, New Poems was also greeted with a chorus of applause. It contains a number of remarkable poems-' Cities of Hell,' ' Grief and God,' ' A Poet's Prayer,' ' A Gleam,' 'After Rain,' 'Endymion,' ' Midnight-3 3 rst of December, 1900,' and the most remarkable of them all, 'William Ewert Gladstone.' Some of these are redolent with Wordsworth's mystic communion with Nature and Vaughan's transcendental spiritualism.

Phillips now turned his attention to drama. Paolo and Francesca, Herod, and Ulysses were his famous dramas. Of these the first named is undoubtedly the very best. But Phillips was more of a poet than a dramatist. Though these were poetical dramas, yet the poetic element far overbalances the dramatic.

With this brief survey we shall now pass on to the poem considered to be his masterpiece, - 'Marpessa.' Its merit does not rest merely on its music. The lilting rhythm moves with exquisite grace and is a splendid vehicle for the expression of the poet's emotion and imagination.

To many it came as a surprise, this re-told legend. For many believed with William Watson " that the poetic possibilities of the classic myth were exhausted." But 'Marpessa' gave the lie to that belief. The tale is simple indeed: "Marpessa being given by Zeus her choice between the god Apollo and Idas, a mortal, chose Idas." It has practically no plot-interest. All its interest is subjective rather than objective-(an instance of the tendency of modern long poems). The plain, bare story is so richly painted, so finely spun out. Watson commented in The Fortnightly: "The youngest of our poets takes this ancient story and makes it newly beautiful, kindles it into tremulous life, clothes it with the mystery of interwoven delight and pain, and in the best sense keeps it classic all the while." "Marpessa" takes us back from the dreary present to the dreamy past. The misty curtain of time is lifted and we witness a drama of love against a background of beauty.

Marpessa was a Greek maiden with a conquering beauty. Young Idas saw her and was smitten with love. Even the god Apollo burned with desire. They met together on an enchanting summer evening, full of blooming freshness. Beside himself with a sense of her maddening presence, Apollo rushed to embrace Marpessa. But suddenly the voice of Zeus rang a warning ; it gave Marpesa liberty of choice. So the rivals pleaded their causes one by one.

Apollo pressed his claim with his divine eloquence. Even like a rose was Marpessa, he said, "As rich and purposeless as is the rose." She was not meant to struggle and suffer. To be beautiful and sweet was her simple lot. And yet, as a mortal, she was to taste the bitter cup of earthly sorrow and suffering. With time she would grow "cool to all things great." Her beauty would fade. Her love also. She would live to see,
" Beautiful Faith surrendering to Time, The fierce ingratitude of children loved, Ah, sting of stings! A mourner shalt thou stand At Passion's funeral in decent garb.
The greenly-silent and cool-growing night Shall be the time when most thou art awake, With dreary eyes of all illusion cured, Beside that stranger that thy husband is."

And then she would die Bereft of 'ctemal thoughts," of golden maginations, of sustaning hope she would he burned in the dusthe for ever.

There was only one way to escape this utter waste To marry the god By his dirine kiss she would be immortal She would dwell with him, far above this dull flat woild in heaven' where to stir Is ecstasy and thrilling is icpose" Roaming with the sun god on his golden ride through the infinite blue above the gicat wide world she would drink in the wondious bauty of it all-all its sarnety delicacy, and grandeur $\mathrm{O}_{1}$ puhaps a tendeici task would beft her womanly nature She could calm the stormy sea, decpen the harvest's green, enhance the erening s btauty ' or sllently attend the fiery funeral of fohage old ' Oi better still she could be a sming angel to suffering humanity, balmmeng its endlcos sorrow

Apollo stopped Poor Idas' What could he say aftef such a powerful argument? Yet he humbly ventured and began with a trill His only offering, he declared was his boundless, passionate unfaling love His emotional appeal foamed up in a musical swell As it subsided Marpessa clasped his hands as if in a trance

Then she addressed Apollo She quite appreciated the worth of his tempting offers But she would prefer carthly sorrow to heavenly bliss She had known no sorrow thll then But she had heard of the suffering " Of men that did beleve, women that loved" Often, as a child, her eyes " grew ignorantly wet" and she " in silence wondered at sorrow " as the tears of hei smiling mother dripped on her cheeks Hence, " by sorrow taught," she too might live in this 'strll' earth and unfold the woman in her-being " irresistably kind, helplessly sweet, a wandering garden bliss" The tortures of the world beyond she would willingly suffer
> " Yet would I not forego the doom the place, Whither my poets and my heroes went Before me,

Since they have died, their death is ever mine ,"
Being human she missed human sorrow

And if she married the god, what then? He had promised her eternal life-but not eternal youth. Apollo would bloom ever-green: while Marpessa would grow old ; the withering grey would creep in; her beauty would fade. And the tragedy of it all: she would live on, conscious of her dying charm and her husband's ebbing passion. Instead of love he would offer pity and kindness-" Most bitter to a woman that was loved." She would have to fall back upon shameful devices to keep her hold!

With Idas, on the other hand, she could live in peace and happiness amid the lovely charm of a quiet hamlet. He would give her passionate children-not some radiant god that would despise their mortal mother, "But clambering limbs and little hearts that err." She would enjoy a sense of security and sympathy in her husband through all the vicissitudes of life. And if the first rosy flush of love dimmed with time and the delicious freshness of youth wore off, " a faithful peace "-
"Beautiful friendship, tried by sun and wind Durable from the daily dust of life"
-would follow in their wake. Of course, they would grow old-but grow old together.
" And he shall not greatly miss
My bloom faded and waning light of eyes
Too deeply gazed in ever to seem dim."
Full of memories, they would "sit with luminous holy smiles" gazing curiously into that mysterious future-their lasting home. Then they would die,-alas, one earlier. Still, they would part like old friends, glad to have met.

Marpessa ceased. Idas with a cry of joy clasped her ; while the god in anger disappeared.
"Then slowly they
He looking downward, and she gazing up. Into the evening green wandered away."

And with these lines the poem ends-not until it has been magically transformed. Dancing on waves iridescent and bubbling with incessant fancy and imagination, it has become " a thing of
beauty " that is " a joy for ever." The poet's imagination spinning a marvellous web of "new and flashing images" kindles our own. In the very opening of the poem it trickles in, mellowy with a dreamy mysteriousness.
" Wounded with beauty in the summer night Young Idas tossed upon his couch and cried
'Marpessa, O Marpessa!' From the dark The floating smell of flowers invisible, The mystic yearning of the garden wet, The moonless-passing night-into his brain Wandered, until he rose and outward leaned In the dim summer: 'twas the moment deep When we are conscious of the secret dawn, Amid the darkness that we feel is green."

And then it conjures up a fitting background for the lovers' conference.
" So

When the long day that glideth without cloud, The summer day, was at her blue deep hour Of lilies musical with busy bliss, When very light trembled as with excess, And heat was frail, and every bush and flower Was drooping in the glory overcome; They three together met;"

In Apollo's magnificent account of the acrial charioting the imagination swells up, in its panoramic view, almost to a Shellyan height.
" And I will carry thee above the world, To share my ecstasy of flinging beams, And scatter without intermission joy. And thou shalt see that first leap of the sea Towards me; the grateful upward look of earth, Emerging roseate from her bath of dew, We two in heaven dancing,-Babylon Shall flash and murmur, and cry from under us, And Nineveh catch fire, and at our feet

Be hurled with her inhabitants, and all
Adoring Asia kindle and hugely bloom ;-
We too in heaven running,-continents
Shall lighten, ocean unto ocean flash,
And rapidly laugh till all the world is warm."
As we read on what a grand pageant passes before our wondering eyes! A vista of scenes opens up-pictures of flaming ocean and blushing earth. Every line is hauntingly beautiful. But the lights in a dew drop vanish under the glare of a microscope. How difficult to " unweave a rainbow."

The imagination reaches its climax in Idas' speech. "It is one of the loveliest and most impassioned love speeches in English poetry," says one critic and rightly we think. The speech is a long one but is well worth quoting at length.

> " I love thee then

Not only for thy body packed with sweet Of all this world, that cup of brimming June, That jar of violet wine set in the air, That palest rose sweet in the night of life ; Not for that stirring bosom all besieged By drowsing lovers, or thy perilous hair ; Not for that face that might indeed provoke Invasion of old cities; no, nor all
Thy freshness stealing on me like strange sleep. Not for this only do I love thee, but Because Infiinity upon thee broods; And thou art full of whispers and of shadows. Thou meanest what the sea has striven to say So long, and yearned up the cliffs to tell, Thou art what all the winds have uttered not, What the still night suggesteth to the heart. Thy voice is like to music heard ere birth, Some spirit lute touched on a spirit sea; Thy face remembered is from other worlds, It has been sung of, though I know not where. It has been sung of though I know not where.

It has the strangeness of the luring West, And of sad sea-horizons; beside thee I am aware of other times and lands, Of birth far back, of lives in many stars. O beauty lone and like a candle clear In this dark country of the world! Thou art My woe, my early light, my music dying."

What is it? A bit of oriental extravagance in idealisation? So it may seem to the superficial. But are we not carried off by its emotional surge? Are we not thrilled by its pulsing passion?-It is all so much like the flutter of a soul in the grip of a love-druken imagination. It makes us forget ourselves and dream delicious dreams. What more?-It has fulfilled its function, this love speech. Surely it is not a mere " aerial lymning," a rainbowy bubble, an evanescent Lamia with an unreal, unsubstantial beauty. It wells up from the depths of emotion and passion. In fact, it is akin to the idealistic 'abandon' of the romantic school. And even like that it is tinged with a glorious mystery.

Poets have sung of woman since time began. What is it that makes her a perennial source of joy and wonder? It is the veil of mystery-the smile of Mona Lisa. She is an eternal enigma to the poets, specially to the romantic poets. Phillips, the romantic, has felt the power of this mystery-has felt it deeply. And he has expressed it in a way all his own.

Idas' rhapsody is not a mere panegyric to Marpessa. It is a glorious tribute to Woman, a mystic homage to Love. Marpessa was to him a source of both sensual and spiritual enjoyment. But his mystic idealism far transcends his sensuous delight. He begins with her bodily beauty but eventually loses himself in its infinite suggestions, all shadowy, strange, unutterable,-mysterious.

Further, in blending the sensuous and spiritual elements in Idas' nature, the poet shows his grasp of the Greek character. It had a twofold aspect. The sensuous side of it found expression in the immortal Greek arts. And, moreover, "the Hellenic mind was endowed with a power of mystical apprehension, now almost departed, of going beyond the material veil of things." The poet dips in the

Greek mind and recaptures that mystic vision of seeing, beyond the externals, the deeper reality of things.

After the impetuous utterances of Apollo and Idas, comes the calm and tender speech of Marpessa in soft accents. The imagination takes a new turn. A lesser artist might have slipped into anticlimax. But Phillips' sense of art did not fail him. Instead of bathos we have a musical fall into " cadence low" from " cadence deep and clear:" the murmurous rippling after a stormy rage. The effect is splendid. With the first streaks of dawn we soar, like Wordsworth's skylark, up into the endless sky amid azure and gold and come back with the shades of evening to the nestling earth. From the world of fancy we slide smoothly and almost unconsciously into the world of fact-a world, beautiful in its own way.

But the beauty of the passage is marred to some extent by the use of the conventional phrase "The pastoral fields." And worse still, the beautiful atmosphere is well-nigh vitiated by a reference to fashionable dress and coiffure which Marpessa would have been forced to culture had she married the god. Perhaps it is an eternal feminine characteristic and is as true of Madam Eve as of Miss 1933. But we have come to look upon it as a particularly modern hypocrisy. To think of Marpessa adopting it! Of course it is not without its 'pathetic touch.' But its apparent pettiness overshadows its underlying pathos. Our only consolation is in the illustrious parallel of Keats who often drops from the sublime ether into petty cockneyism, as in Lamia. But we can never pardon Phillips for likening the glorious rising sun to an "eager bridegroom" springing upon his bed. Thou too Philips!

We may note, in connection with this speech, the poet's attitude to sorrow and death. There is not much philosophising about it. It is essentially poetic. Child Marpessa's 'wonder at sorrow' ripens into a cheery acceptance of the hard facts of life-but the wonder lingers.
" Yet I being human, human sorrow miss."
" For pain came with the sap, pangs with the bloom:
This is the sting, the wonder."
Set against a background of memory and hope, sorrow and death shed their ugliness and horror and emerge solemn and beautiful.
" How wonderful in a bereavéd ear
The Northern wind ; how strange the summer night,
The exhaling earth to those who vainly love.
Out of our sadness have we made this world
So beautiful ; the sea sighs in our brain, And in our heart that yearning of the moon."
O no ; this is no philosophic reasoning. This is but the colouring of a poetic imagination.

So long we have seen how varied and rich is Philip's imagination. It revels equally in grand and homely imageries. It glitters in beautiful similes. It bursts into rapture and radiance. Yes; but it also plays in whisper and twilight. Splendid lines, pregnant with thought and suggestion, abound in the poem. Idas' speech is made up of such lines. To re-quote but a single:
" that face that might indeed provoke invasion of old cities."
The magnificent tale of Troy flashes up for a moment as we read it. Similarly the skilful use of "Babylon" and "Nineveh" strike a deep chord in our memory and draw out a rumber of tales twined round these names, specially the tales of their dramatic fall from the crest of pomp and splendour. The particular words used along with them (coming as they do from the sun-god and god of prophecy) subtly suggest their " fiery funeral" to be (as hinted in the Bible). But the master-touch is where the poet refers to the tears of Marpessa's mother. It suggests the material of an interesting story to be shaped by the reader's imagination.

Suggestion, again, combines sometimes with condensation to give a passage a rare effect. Phillips' imagination does overflow into romantic exuberance: but it also shines in classic-restraint. Idas' speech has the " fine excess" but here and there are gems of fine restraint too. Thus, in Apollo's lament for the prospective death of Marpessa, the poet suggests a wonderful contrast and a wonderful imagery-awful, grimly mysterious, indescribable-all in only four lines.

[^0]To be dispersed upon the whirling sand!
Thy soul blown seaward on nocturnal blast!'
Even in describing Marpessa's beauty, where other poets would have poured forth their heart " in profuse strains," Phillips shows a striking reticence. He concedes a single line:
" Like perfect fruit
Even at the moment was her beauty ripe."
A single line and it suffices. It suggests the perfection of Hellenic form. Again, condensation and suggestion unite to give the closing lines of the poem a singular effect. Rarely have such few and simple lines attained such a success. The deliberate omission of any word between the loving pair after union gives us an idea of brooding silence. The eloquent hush. and "the evening green." How suggestive! We are faintly conscious, as of a soft incense, of the rapturous 'joy and tear-wet gratitude of Idas; of the serene, delicate, speechless happiness of Marpessa; of the breathless expectation of both; and of the unborn future odorous with sweet promises-and perhaps with beautiful sorrow. The poem ends. But the image of the young lovers strolling off hand-in-hand, slowly and silently, into that strange green, that fascinating mingling of light and shade,the image lingers in our memory as the image of a beloved face or the soft echo of a half-remembered tune.
" Marpessa" has proved to be a nine days' wonder, so to say. It had an enviable reception on its first appearance. It was hailed with ardour by eminent critics and almost by all the prominent reviews. It was considered fit to be printed as one of the " Flowers of Parnassus" (a series of world's famous books illustrated). Poems which included "Marpessa" won the laurel-wreath of the Academy. It was frequently re-printed till the War. All these argues "Marpessa's" contemporary popularity. But in 1915 the poet died. In the meantime the Great War rushed in. In the tremendous convulsion that followed "Marpessa" and its writer sank into oblivion. Only a quarter of a century-and now we scarcely even hear of Stephen Phillips!

Is 'it due to the, should we say, 'opposite of snobbery'? Or is it the trick of time which has played many a hero false? Have
we not in our own time seen the rise and fall of Kipling, the lull in the Byron-craze, and the toning down of Tennyson-mania? Why, Shakespeare himself was discredited by the Augustan England! Phillips has suffered much less.

Some have attributed it to his lack of originality. Standing on the threshold of transition from Victorian to Modern Poetry, Phillips sounded no new note. It seems, "originality" is the cry of the hour. Before the dazzling " modernity" of the post-war poets, poor Phillips has paled into insignificance. He is a back-number. He has timidly followed the beaten path, smoothed by great pioneers. And these critics also add, "At best he resembles Keats."-Why, but that is saying a lot. We may do well to remember the words of a wise man: "It is easier to differ from great men than to resemble them."

The supposed 'unoriginality' of Phillips and the other poets of Primavera is due to their deliberate flight from the heat of contemporary life and thought into the cool recesses of medieval romance and classical legend. Muse, they believed, sat dreaming on Ida.
" How should she face the ghastly, jarring Truth, That questions all, and tramples without ruth?"*

They cared more for rhythm and expression than for novelty and originality of thought. Says Manomohan, " How we have sacrificed form and expression in our devotion for modern thought and for contemporary subject-matter, and the idea that a poet should have something new to say."

There is at least one definite cause for the setback in Phillips' popularity. He gave an air of realism to most of his poems. A false or ' unreal' realism, devoid of the conviction and sure-touch of lifeexperience. For a time the deception passed off. But before long it was detected and the poet's gathering fame dropped and dwindled. But this charge does not apply to "Marpessa." "Marpessa " is a mythical theme imaginatively treated.

[^1]Such is " Marpessa." If " Poetry is the language of imagination and passions," as Hazlitt asserts, or if " Poetry is the utilisation of language as the handmaid of Music," as Yeats declares, then " Marpessa" is certainly a fine piece of poetry. Indeed rarely so. Is it not strange that the writer of such a poem should be so utterly neglected? " Faulty, thy name is woman," says Shakespeare and fame is " Dame Fame." A fickle Marpessa (?)
" Liable but to breezes and to time."

# THE MODERN STATE 

Krishna Gobinda Bose-Fifth Year, History.

EVERY student of history knows that the ancient state was, if not anti-national, at least non-national. The state was a mere conglomeration of peoples, whose only bond of unity was usually common subjection to an autocrat in a distant city. Political organisation was still in its infancy: administrative order was not yet even a dream. The business of the ruler was to gather money and to deal in rough and ready justice: the encroachment of government into every sphere of human activity had not yet begun. National unity existed neither in theory nor in practice: mere bonds of anthropological kinship sometimes drew groups together. It is in these terms that we must describe the states which centred in ages past round Egypt, Babylonia, Assyria and Persia. Even when Athens created an empire which was succeeded in turn by the vast fabrics created by Macedon and Rome, conditions in this respect did not improve. Greek love of individualism led to the creation of citystates, and thus perpetuated the partition of a nation into numerous political units. The temporary and partial success which Athens achieved in giving birth to a Hellenic unity was ultimately responsible for the growth of the ideal of Pan-Hellenism. However that may be, the vast empire established by Alexander followed closely the loose mass of territories which is known to History as the Persian Empire and was in every sense the negation of nationalism. The history of Rome is the marvellous story of the subordination of a world to a city, and, though administrative order was better secured in the Roman Empire than in any other ancient state, yet its very foundation was the non-recognition of the claim of a people to have a government of its own.

Travelling downwards, through the course of the stream of History, we come to the Middle Ages. Medizval civilisation was established on the bed-rock of feudalism. Admitting that feudalism was the best form of social organisation that it was possible to maintain
at that time, the fact that it prevented the formation of national states cannot be gainsaid. As long as the titular head of the state remained a resourceless, helpless tool with a few personal servants to look after his business, as long as the baronial castle controlled men, money, and even the course of law and justice, as long as the people had no other alternative but to submit to baronial tyranny through which alone a rudimentary political order could be secured, the modern state could not be born at all.

Gradually, monarchy strengthened itself almost everywhere in Europe, and aimed at crushing every force within the state which disobeyed the state itself. A renovated monarchy and a privileged aristocracy went ill together, and the rights misappropriated by the latter were gradually reconquered by the former. Monarchy allied itself with the people, and the combined resources of these two orders crushed the lingering rights of the third. Out of the death-pangs of feudalism arose the modern state.

Monarchy, however, played a very selfish part from the beginning. Once the dread of feudal revival was a thing of the past, it gave up all pretensions of conciliating popular opinion, and claimed for itself exclusive power and autocratic control. Kings of strength and vigour were born, and to them the common folk, just relieved from the Egyptian bondage to the nobles, were no rivals. Monarchy not only made itself the supreme force in the state: it was the only force that counted.

Thus securing its own position and making its pretensions unassailable, monarchy aimed at creating national states, centralised within through strong bureaucratic administration, powerful outside through a strong military organisation. It will be our purpose to trace the activities of the monarchy in various European states, with a view to determine the contributions which it made to the creation of the modern state.

The history of the making of modern England may perhaps be traced from the regime of Henry II. When he came to the throne he found England exhausted by nearly twenty years of anarchy, the machinery of the government dislocated and the people sick of feudal misrule. But he was a strong ruler. He organised the judicial and
administrative system of the state in such a way as to prevent the recurrence of anarchy. As Professor Trevelyan remarks, "The new judicial procedure that he introduced was destined to shape the future of English society and politics, and to give distinctive habits of thought to all the English-speaking nations in states unborn and accents yet unknown." The strengthening of the royal courts and the growth of common law led to the gradual abolition of feudal courts. The systematic policy of crushing feudal opposition in every sphere of activities which he relentlessly pursued made him as autocrat as the Grand Monarque of France, and English political organisation was reshaped under the aegis of benevolent despotism. The success of his system was evidenced by the fact that even during the reign of his successor, Richard, who took more interest in crusading activities than in the affairs of his state, royal power was not threatened.

The period from the reign of John to that of Edward I, witnessed the origin and growth of the English Parliamentary system. The theory of Stubbs, that Edward I wanted to become the constitutional ruler of a united people and willingly surrendered a portion of his power in order to bestow it on the people, is no longer accepted by modern scholars. We now know that John and Henry III desperately struggled to retain everything which Henry II had enjoyed; that their failure led Edward I to believe that the monarchy, in order to deprive the nobility of its overwhelming influence, must find an ally in the knights and the burgesses ; that, finally Edward I really intended Parliament to be an anti-feudal instrument. Parliament thus appears to be not a right seized from an unwilling king by an alliance of the nobility, clergy and the people, but a strategic measure of autocracy fighting for defence. The central machinery of the English constitutional system is therefore a gift of despotism itself.

Then the Hundred Years' War and the Wars of the Roses came, and they killed the last vestige of feudalism. Unceasing warfare made the people tired of anarchy and misrule. They thought it better to rally round the king and to exalt his power so as to prevent the revival of baronial turbulence. Tudor despotism was based on this psychoogical complex of the people at large. Henry and his descendants reserved the old mediæval institutions-King's Council, Parliament, Jommon Law, Justices of the Peace and Jurymen-but breathed into

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them all a new vigour and compelled them all to become no longer checks on governmental efficiency but instruments of royal power. The process of the exaltation of royal power reached its culmination in the reign of Henry VIII. The King's majesty reached every corner of the state and directed every aspect of its affairs-political, ecclesiastical and even economic.

And yet, strangely enough, it was during the rule of these benevolent autocrats that the English Parliamentary system put itself into a definite shape and prepared for the anti-monarchical stand which it was to take in the next century. The explanation of this apparent anomaly is not far to seek. The Tudors, in their desire to conciliate popular opinion, and knowing full well that they could rely on Parliament for anything they needed, always favoured the growth of Parliamentary rights and privileges. Parliament, originally a creation of the prorogative, gathered from prerogative again the momentum which enabled it to become the supreme force in the British constitution.

It was owing to Henry II that anarchy was quelled in the early morning of English history, instead of the late noon as happened in the feudal lands of the continent. It was in the latter part of the eighteenth century that we find France altogether free from the influence of the feudal barons and occupying a place among the national states of Europe.

The story of French supremacy in Europe begins from the reign of Philip Augustus. The election of Hugh Capet was a triumph of the feudal nobles; but the triumph proved to be the fatal disaster. Philip saw in his fame a revival of the glories of the Roman empire. He could not tolerate a rival within the state. And the possession of about one-fourth of the territories of France by the English was a gigantic hindrance to centralisation on the part of the French kings. This explains the century-long French policy of expelling the English from France.

The reasons of Philip's successes against the English are apparent. He gave France the three essential instruments of good government, -a strong army, a full treasury and a well-regulated administrative system. His influence, his wealth and his ability enabled him to
disregard the barons and in his relation with feudal nobles Philip showed that he was determined to be the master. He abolished the feudal courts and took his friends as his councillors, and the whole administration centred in Paris. His successors were also able rulers and the impression created by Louis IX upon monarchy was frought with immense potentiality. It was through mere unpretending goodness, rather than by any specially brilliant gifts of intellect that he worked out his purpose. He himself legislated and made royal justice felt as a reality throughout the kingdom.

The Hundred Years' War was the next step towards the exaltation of the French monarchy. By the middle of the fifteenth century the war came to a close and with the exception of Calais the English lost all their French possessions. The results were momentous in French history. The nobles were prostrated ; the power of the king became supreme and the spirit of nationality assumed a vigorous form.

The gradual advancement was greatly ensured by the unscrupulous measures of Louis XI, who " was a perfect Ulysses in cunning and deceit." His successor Charles VIII commanded a large standing army made up largely of troops instead of feudal retainers, which shows conclusively that the feudal system, as a military organisation, had virtually come to an end and the path towards the supremacy of the king paved. This omnipotence of the king reached its climax under Louis XIV. His path was made clear by Richelieu and Mazarin who had suppressed every rising against the monarchy and extended French frontier.

If France has ever been a prime factor in European history in all ages, it is due undeniably to the unscrupulous and often unassailable policy of the long line of autocrats from Philip Augustus to Louis XIV. As long as the nobility was supreme in the country, France was a loosely connected confederacy of aggressive barons, with a titular head whose inherent weakness prevented him from making his influence felt in the continent. Before the establishment of the Third Republic towards the close of the last century the French people failed to establish a stable political organisation, and their repeated submission to despots like Napoleon, Louis Philippe and Napoleon III show their incapacity to preserve the liberty of which they made so much in their speeches and writings. To her monarchy, which, unlike the British
has never been constitutional, France owes her supremacy in Europe as well as the brilliance of her culture.

Turning, then, to the history of Spain, we find that from the eighth century the country was under the subjection of the Muslims and it hardly resembled an European country. In course of time some stray Christian city-states came into existence and of them Castile and Aragon were important. They fought out the Muslims, and Aragon and Castile became the chief states in Spain. And the rise of Spain was made possible by the virtual union of Castile and Aragon through the marriage of Ferdinand and Isabella. The conquest of Granada made Spain a homogeneous state and the process of unification was complete. They took little or no notice of the Cortes and were not hampered by constitutional checks. The accession of Charles $V$ to the throne of Spain in the sixteenth century joined her to the continent and the discovery of America made her for almost a century the most powerful of European States. Spanish autocracy, of which Philip II was undoubtedly the ablest champion, continued unabated even during the last century.

To all students of history and politics, Russia has ever been the synonym for dark despotism. Without disputing the truth of that description it may be said that without despotism there would have been no Russia. Towards the close of the Middle Ages, Ivan III freed Russia from the domination of the Mongols and the overshadowing influence of the barons, and the first step towards centralisation was laid. Under his successors this progressive movement was continued, but it was not till Peter the Great assumed the reins of government in his own hands, that Russia came to occupy a place in the European family of nations. He extended the frontiers, Europeanized Russia by his radical reforms and stabilised the omnipotence of monarchy. He organised the army, subordinated the church to the state, and curbed the power of the barons. It may safely be said, without any fear of contradiction, that had there been no autocrat like Peter, Russia would have been left a disorganised conglomeration of principalities, more Asiatic than European in outlook and civilisation. The work of Peter was continued and completed by Catharine, who deserves to be placed in equal footing with her illustrious predecessor. The remark of a modern historian, "If it can be said of Peter that
he made Russia an European power, it can be affirmed with equal truth that Catharine made Russia a great power " may be substantiated by even a stray reference to the activities of this masculine ruler. Czarist despotism continued unabated during the whole course of the nineteenth century.

The emergence of Germany into the Modern Age was not associated, as was the case with many European countries, with her transformation into a centralized national state. Germany had to wait till late in the nineteenth century for her unification: the nationalist aspirations of the German people were satisfied long after other European peoples had satisfied theirs. The reasons are to be traced to the peculiar geography of the country and more to the anomalous historical traditions connected with it. The wrecks of the past survived more in Germany than anywhere else in Europe. The lingering absurdity of the theory of the Holy Roman Empire, the prevalence of feudalism which the emperors were powerless to crush, the rise of city-states, the petty rivalries of hundreds of princes were great obstacles in the way of German unification. It seemed for a time that Charles $V$ with the help of the knights would make Germany a national and united state. But the rising protestantism and the schism it created nullified the aims of Charles. Napoleon by abolishing the Holy Roman Empire paved the way for the future unification of Germany, and it was Bismarck who by his 'blood and iron ' policy raised Germany to occupy a place among the modern states of Europe.

The story of the rise of Germany under the Hohenzollerns, perhaps the most brilliant and in a way the most instructive chapter in Modern History, need not be dwelt upon. But the outstanding characteristic of the story itself is the fact that Germany was made not by popular representatives but by Bismarck, the staunchest champion of monarchy. The Frankfort Parliament of 1848 witnessed the signal failure of popular theorists to achieve German unification, and this incapacity, revealed in an age which is known to History as the era of democracy and nationalism, is significant enough. It was Bismarck's system which enabled Prussia to threaten the world with the terror of German occupation. It is easy to assail that system as the denial of democracy ; it is easier to ridicule it in the light of its
ultimate failure. But when we contemplate, side by side, the deliberations of the Frankfort Parliament and the tortuous activities of Bismarck, the whole significance and utility of monarchy even in the days of orthodox and exclusively jealous democracy flashes before our mental horizon.

Italy, the mystic land of romance, of art and culture, was not fortunate enough to be politically united till the latter half of the last century. Her case was almost identical with that of Germany. She was split up into a number of independent city-states, torn asunder by mutual rivalry and petty jealousy. There was no national or regular government. The rise of industrial cities, the unfortunate rivalry between Pope and Emperor which resulted in dividing Italy into two camps, the intervention of the popes in Italian politics, all these were stumbling blocks to Italian unification. These obstacles were conquered, and the risorgimento was brought about, by the visions of Mazzini, the fanaticism of Garibaldi and the cold calculations of Cavour-the champion of monarchy. Here, as elsewhere, we find the same principle at work-political unification is the result of monarchical action. Mazzini's splendid dreams would have remained confined to brilliant pieces of literature, and Garibaldi's burning zeal would have spent itself up in prison, if there had been no Cavour to raise a magnificent structure upon the foundation of war and diplomacy.

This very brief historical survey of the incidents and forces connected with the political unification of the various European countries has been pursued in vain if it has not revealed the services rendered by monarchy to the growth of modern civilisation. The modern state is the creation of the modern monarchy. Organisation and strength, the two essentials, which every state must possess, if it is to secure internal consolidation and external expansion, were the gifts of monarchy. That the monarchs were often unnecessarily unscrupulous and neglectful of the true interests of the people cannot be denied. That they inflicted untold sufferings on the helpless peoples and by blind unreasonableness led to the ruin of their own cause may be admitted. But nothing can detract from their glory that it was they who created the omnipotence of the modern state. The autocracy which they enjoyed passed on in time to the new series of despots who claimed to represent the people-the modern public men who submit to
the people at the time of election and who make the people submit to themselves once the election is over. Everywhere in the modern world we find that the state tends to be, and perhaps need be, omnipotent. This is the negation of feudalism, and feudalism had been destroyed by the monarchy. Modern socialism is in a way another aspect of benevolent despotism, in that the former, like the latter, takes away the initiative from the individual, concerns itself with everything he requires, and turns him finally into a machine that must move in the fashion laid down, the only distinction between the two perhaps lies in the fact that while the dictator in the modern state owes his powers to the people, the dictator of the early modern state owed his powers to hereditary right.

Considerations of space have compelled us to concentrate our attention to only one of the phases through which the modern state has grown, namely, the phase of its origin and early triumph over its rivals. We have attempted to show that the victory of the centralised national state was due to the initiative of the monarchy, and this basic fact accounts for the monarchical form which the state of necessity assumed in the early Modern Age. The second phase in the growth of the modern state began with the anti-despotic gospel of the French Revolution and reached its culmination in the nineteenth century. The earlier historical development of the state had rendered inevitable a contest between the monarchy and the people, because it is the natural tendency of humanity to free itself from old shackles, if only to find itself encircled by new ones. When the monarchy became the single determining force in the state, popular interests suffered from dynastic ambition and personal whims. On the other hand, the bourgeoisie class had been gradually strengthening itself through administrative experience, legal practice, intellectual eminence and commercial success. Such a powerful class, in a sense richer and abler than the older nobility, could not be long excluded from power and utilised as mere static forces under the control of irresponsible monarchy. The fuel was added to by the preachings of the philosophers, and the revolution broke out. The era of revolution, once ushered in, continued to progress for three quarters of a century to come, and more or less influenced and shaped the destiny of almost all European countries. Nationalism and democracy triumphed in
many parts of Europe, and even where these principles were not recognised as basic ideals of state organisation, their potency and utility captured popular imagination and frightened the ruling class.

The third phase in the evolution of the modern state arrived after the Great War, and about it, it is now too early to speak. Two tendencies, however, may be noticed. The first is that the democratic national state has been officially accepted as the ideal form of state organisation, and in those parts of Europe where democracy and nationalism had been unable to win the day in the nineteenth century -the German Empire, the Dual monarchy of Austria-Hungary and Turkey-their victory has been complete. The second factor in the recent evolution of the state is its tendency to tear itself from isolation and to find a place in a world-wide association of political organisations on the basis of freedom and equality. Of this tendency the League of Nations is the unique and visible symbol.

# THE FRENCH MONARCHY 

Jyotirmoy Banerjea-Fourth Year, Arts.

THE French monarhy had an ecclesiastical origin-the baptism and coronation of Clovis. It began as a secular organisation. But in the course of several centuries it was transformed by the influence of the clergy into a sacerdotal and religious dignity for a thousand years. It is this which distinguishes the French Monarchy from the other monarchical institutions of Europe. It explains many features in the history of France, in French Catholicism and in French idealism.

The French kings were proud of their dignity, which, they were convinced, they received through Divine mercy. " Kings and priests," said Louis VII, " are the only ones who are consecrated by the ecclesiastical institution by being anointed with the Holy oil." From the hallow personality of the kings, there issued priestly healing powers. Until the French Revolution, the French kings healed scrofula by the laying on of hands. Even Charles X revived this practice, which, however, at this time aroused the spirit of mockery.

As a priestly king, the French monarch had to perform certain ecclesiastical duties, as for example, to secure the practice of the legal order of the church in his dominions and to guard the purity of the faith. Robert the Pious was the first French king who ordered the burning of heretics. At the Synod of Chelles which was presided over by Robert, the Archbishops of Rheims, Seins, Tours and Bourges declared that the right to reverse papal decisions belonged to the French bishops. Herein lies the germ of the whole Gallicanism of the future. It has been truly said that the French clergy were more "royal" than Roman in their sentiments: they could and did see in the king of St. Denis, their Supreme Head. This is illustrated by the fact that the title of Rex Christianissimus was borne by the French kings from the time of Louis XI and that Louis received this honour from the Pope for the revocation of the Pragmatic Sanction of Bourges.

The growing power of Normandy greatly troubled the kingdom of the early Capetians. This danger became a definite menace when the Normans conquered England in 1066 A. D. The Norman Dukes now became rulers of the kingdom. Henceforward the French kingdom was troubled both by Germany as well as by England. The powerful Norman dynasty of the Plantagenets which ruled over England, Normandy and also over central and south-west France, was conquered after a struggle for a century. It tried to raise its head once again with the help of the king, Otto IV of Brunswick. But the allies were beaten in 1214 at the battle of Bouvines. This victory meant for the French monarchy the final victory over feudal resistance and the preservation of its authority as a continental power. The south, however, was still independent. Through the Albigensian Crusades it was won for the crown: by means of abominable horrors, through rivers of blood Southern France was brought under the influence of the monarchy and of the Ile de France.

At first the kingdom of the Capetians was an elected monarchy, but through its own vitality it became a hereditary monarchy. This development was a matter of great significance for the historical importance and greatness of France.

The first Capetians always ensured the continuation of their dynasty in spite of the system of election, by arranging that the heir to the throne should always be elected during the life-time of his father, after the example of the German Emperor. In this way the crown remained in the hands of the Dukes of France. The last time that the succession was secured in this manner was in II79, when Louis VII had his son Philip Augustus elected king. Until that time, therefore, the only legal status of all the Capetians was that of election. But the strengthening of the monarchy after the activity of Suger also turned out to the advantage of the Capetian claim to inherit the crown. This was apparent after the death of Philip Augustus. The hereditary character of the French monarchy received legal sanction not long afterwards. Later this conviction was formally recognised in juridical form.

The hereditary monarchy preserved France from that weakening and destruction of the central authority and of the national unity which was fatal to Germany and Italy. Another favourable circumstance was
the fact that Hugh Capet and his first ten successors always had a direct male heir. From 987 till 1316 they follow in a direct line of descent. Royalist writers see in this an act of Providence, we see in it the irrational factor, 'accident.' This 'accident' that, for hundreds of years all the Capetians had a son who survived them, cannot be explained by any of the usual historical logical methods as a legal matter. But it is the cause which enabled the hereditary law to be carried out; this explains why the Capetians were able steadily to increase the power of the monarchy, which again is the reason why France became great. Among the Capetians there were some very outstanding rulers. In the figure of St. Louis, the French kingdom gained a consecration which increased its prestige. His grandson Philip the Fair was so strong that he was able to suppress the Order of the Knight Templars, to force the Papacy to depend upon France. This royal Gallicanism reminds us of Louis XIV ; in other points too both these reigns resemble each other: both fought against financemagnets in the interior of the country, both struggled for the possession of Flanders and both strengthened the central authority of the crown.

Soon after the death of Louis, the royal succession passed to the younger line of the Capetian dynasty, without conflict-to the Valois. It was considered quite natural that women should be ineligible to govern. At the same time, however, there arose a crisis which threatened the French monarchy with utter ruin: this was the Hundred Years' War with England, intensified by the bloody conflicts between the Burgundians and the Armagnacs. In 143 I English king was crowned king of France in Notre-Dame. But in those years of terror, at the beginning of the fifteenth century, French patriotism was roused. It found moving and inspiring expression in the literature of the day and it was incarnated in an active and victorious manner in the figure of the Maid of Orleans, the peasant girl of Lorraine, who reconquered the land for the king of France. To-day for all French people Jeanne d'Arce is the most living symbol of national ideal. Her presence at the coronation of Charles VII in Rheims makes her appear as the instrument of the renewal and establishment of the monarchy.

Once again there occurred a crisis which menaced the unity of the nation and the authority of the dynasty. This was the War of Religion in sixteenth century which lasted for a generation. Therefore,
however, Henry IV and Richelieu carried on the work, which completed the organisation of the monarchy. Under Louis XIV, Royal Absolutism received both the theoretical basis and its magnificent development. Its visible monument is the Palace of Varsailles. The steady development was possible because in France there had been no Magna Charta, and there was not quite so definite and effective a tradition of parliamentary rule.

Louis was the final creator of absolute monarchy. Through his wars he completed the programme of the policy of Richelieu and the triumph over the Hapsburg dynasty. By the Revocation of the Edict of Nantes he completed the work of the Counter-Reformation. Finally he organised the artistic and intellectual forces of the nation and in so doing created in all spheres of culture a truly glorious France which was representative of a century of civilisation in Western Europe.

This style, we call French classicism. It is not an imitation, either of the style of antiquity or of the Italian Seicento. Varsailles reminds us of Sophocles. But all the creations of this classical spirit in architecture, landscape gardening, poetry and eloquence reveal the same law of style, a complete and pleasing proportion; the victory of proportion over fantasy, the subduing of the individual to the law of an ideal balance. It was for this very reason that the French classic style was able to be both a national style and a universal style. Thus in it we see once more the peculiar quality of French civilisation, the power of realising the universal in and through the national.

At the height of the period of Louis XIV Bossuet once said " Sous Louis XIV la France a appris à se connâitre," that is, 'under Louis XIV France has come to know herself.' The significance and importance of this period has been very truly described in this line. The French spirit through the civilisation of Versailles came to full self-consciousness. It was not merely posterity which declared that this epoch was classical. The epoch itself felt and knew that it was so and deliberately willed that it should be so.

During the epoch of Louis XIV, France experienced a development in the state, in the intellectual sphere and in its inner spirit such as no other modern nation has known. It was so deep and thorough
that even the shattering experiences of the Revolution and of the nineteenth century were unable to eradicate its influence. Certainly the Revolution, democracy and the republic have entirely transformed the form and spirit of the State. But the heart of the French conception of the state, unity and centralisation is still essentially one with the inward impulse which the French monarchy realised through eight hundred years of its history. To-day Louis XIV means more to the French people than Napoleon. In the French of the present day, even to the free-thinker, the Monarchist-Catholic seventeenth century is absolutely the great century par excellence. For it has given a permanent form to the natianl spirit.

As a practical political programme, the Royalist Movement of the present day has no significance in France. As an idea, however, it exerts a strong influence over the intellectual elite. It is the French form of neo-conservative though which is so characteristic to-day of a large section of the intellectual youth of Europe and which expresses itself as a romantic idealism with 'Restoration' as its watch-word. In France it has destroyed for ever the official historical legend of the Third Republic. Even those intellectuals who adhere to the Republic 'admit objectively the historical importance of the monarchy.

So long a connected account of the history of the monarchy has been presented very briefly, incidental mention being made of some of its many characteristics. Now we shall study the monarchy as a whole and see wherein lies the importance of the monarchial period.

To begin with, " It was the French monarchy which had resisted the efforts of a self-seeking feudal aristocracy, which in its own interests, would gaily have dismembered France. It was the monarchy which had withstood the hardly less mischievous tendencies of the political Huguenots. It was the monarchy, which had raised France to a dazzling pinnacle of prestige among the powers of Europe." It has been said before, that the French monarchy had given birth to some of the most characteristic features in the French State and French civilisation, viz., Centralisation, Gallicanism and Classicism. Further, the traditional policy of expansion, especially, the famous Rhine policy, goes back to the age of monarchy indeed to its earliest days. Richelieu and Louis XIV, the Revolution and

Napoleon, all only continued till further the historical Rhine policy of the French monarchy.

The French monarchy has been openly criticised for continuing the Rhine policy. This policy has been criticised as being unnecessary and agressive. But it is idle to discuss whether the Rhine policy was necessary ; whether it was determined by the accident of history or by geographical or political factors. Those who blame the robiberies and scandalous deeds of Louis XIV should also blame the blinded German princes who, from the days of Charles $V$ to Napoleon, have betrayed and sold Germany. Again, it has been said that it was a blunder for King Louis to continue the policy of territorial expansion instead of adopting the policy of commercial expansion like England. The answer to this charge is that the policy of expansion was the traditional policy of the monarchy. France was not fit for commerce like England. So it was quite natural for Louis to stick to the tradition instead of risky experiment in a doubtful field. Besides, the French Revolution has been traced back to the "ambitious absurdities of monarchy." In this connection Louis XIV has been held most responsible. Taking for granted that Louis policy was the cause of the Revolution, we can say on the authority of Hassal, that the blame was shared not solely by the monarchy but by the people alike. For " the French nation made Louis XIV and Louis was the epitome of the French people."

But in the nineteenth century the French monarchy had ceased to be efficient. Things at home and outside brought discredit upon the crown. The throne professed no doctrine and consequently no policy. The monarchy was declining gradually, till at last as the result of the disaster of Sedan in the Franco-Prussian War, the Third Republic, which has proved stable to the present day, was inaugurated.

Now, why did the French monarchy fall? If history can teach us anything it is that disaster is always the outcome of blunders and defects that might not have been committed. On this ground historians while making a diagnosis of the fall of the monarchy selects certain elements to be the cause of its decay. As regards the defects of the French monarchy, it has been pointed out by Mignet in his " Histoire de la Revolution Francaise " that " from its establishment
the French monarchy had no settled form, no fixed and recognised right."" Defects and blunders there might be many more. But we should not after all forget that irrational factor, the inevitable. The decay of the French monarchy was the inevitable result of its greatness. So was that of the Roman Empire. 'In history,' to quote the words of Freeman, ' every step has also been a step backward.'

# THE GEOGRAPHY OF PRAGYOTISHA 

Birinchi Kumar Barua-Sixth Year, Pali.

PRAGYOTISHA was the ancient country on the Purba regionগৌড় কামর্রপকাঃ প্রাচ্যবিবিষাষাঃ ।* She figured conspicuously both in the Ramayana and the Mahabharata, and we find numerous references to this mighty kingdom in other literatures also. Before we begin about the boundary and extent of this territory, let us try to see how this kingdom was established and Aryanised.

In the Âdikânda of the Ramayana, Viswamitra is found to have given Prince Rama an account of Magadha and the country around it. According to him, in the olden days Magadha went by the name of Vasu. Kusa, a great king and an offspring of Brahma, had four sons, who severally established four kingdoms, namely (a) Kucacava at Kaucacavi ; (b) Kucanabha at Mahadaya or Kanyakutya; (c) Vasu at Giribraja and (d) Amutraja at Pragyotisha. But strangely enough this anecdote is not referred to in the later texts. The Purânas and the Tantras seem to have completely ignored this account in the Ramayana, having attributed quite a different origin. According to the Harivamsa and Kalikapuran, Naraka, the son of Narayana by Dharitri, was the first king to have established this kingdom. Naraka is too well-known in the Epics, and he is mentioned also in the copper-plate inscriptions of the later kings. Though most part of this account is rejected to-day as a pure myth, yet this much can safely be accepted that Naraka was the first Aryan hero to have come and settled in this part of India. Naraka was brought up in the palace of King Janaka of Videha and he married Maya, a Videha girl.

A hero of आय্যবर्త but inspired with the love of conquest, Naraka marched eastward for victory. He crossed the river Lauhitya and found the territory inhabited by the Kiratas with their Lord Ghataka. Who these Kiratas were, will be discussed later on. Naraka killed Ghataka and drove away the inhabitants beyond Karatoyâ.

[^2]But after a time Naraka turned a despot and became an avowed enemy of gods and Brahmins. So, at the request of Indra, Krishna came from Dwarka riding on Garuda and killed Naraka and with him, hosts of daityas, danabas and rakshyasas. Krishna then placed Bhagadatta, the son of Naraka, on the throne and inaugurated him as the king of the whole of Pragyotisha.

With the accession of Bhagadatta to the throne, came the glorions days of Pragyotisha. Bhagadatta was a mighty warrior. He soon established his territory firmly and extended its boundaries on all sides. It is from the time of his reign that we get an idea of the geographical location of Pragyotisha. In some of the older literature and copperplates of Assam it is found that after his accession, Bhagadatta propi. tiated the great god, Mahadeva, with his prayers, who granted him boons- তুষ্টেন তট্মে দদষू পর্রিপত্তনোধিয্রড্থ?। This পরিপত্ত্ণ has not been identified till now; it may perhaps mean the mountainous region on the north, i.e., the Himalayan region. We have several instances in the epics where Bhagadatta and his kingdom have been referred to as পর্বতপতি and শৈলান্য। In the Mahabharata we find:-
"তथl

Referring to the conquest of Arjuna, it is said, in the same epic that after defeating all the kings who dwelt on the Cakala-dwipa and seven dwipas, Arjuna advanced to Pragyotisha and there had a great fight with Bhagadatta. Bhagadatta, the king of Pragyotisha, was surrounded by Kiratas, Chinas and many other soldiers who dwelt in the marshy region near the sea.- "স কিরাডৈশ্চব চोटৈनশ্চব বৃত্তঃ প্রাগজ্লোতিষোইঅ্র।" Again in the Udyoga Parva, we have "encircled as by gold his
 ए কাঞ্চনৈনরিব সমব্ত্তম্ বভৌ বনম্।"

Now who were these Chinas and Kiratas? The Chinas were certainly the Chinese on the extreme east. Bhagadatta had, no doubt, got under subjugation some parts of China. This Mongolian race had a close connection with Pragyotisha, which the latter maintained even to a much later period. There was, and still is, means of communication between these territories over the mountainous region. Even
to-day opium is smuggled to Assam from China through these mountain routes.

The Kiratas were a Mongolian tribe living in the Himalayan region. Mr. Pargiter in his account of the eastern countries writes " The word Kirata, no doubt, is the same as the modern names Kirati and Kiranti, which means native of the Kiranti Des or mountainous country lying between Dudkosi and Karki rivers in Nepal. . . . . This name was used in a comprehensive way, for it was applied to tribes inhabiting the Himalayan range and its sudden slopes from the Punjab to Assam and Chittagong." Further he adds, "Considering this portion and their affinities, it seems clear that Kiratas were tribes of the Mongolian race."

In the Aswamedha Parva also we find that the sacrificial horse of the Pandavas after passing through Triguna, i.e., Jalandhar entered the territory of Pragyotisha. Unless Pragyotisha was extended beyond the mountains, this was not possible. In the Raghu Vamsa, Raghu going on his conquest towards the north, conquered the Himalayan region and entered Pragyotisha.

According to a text of a much later period the boundaries of Kamarupa, the later name of Pragyotisha, extended on the north as far as Dikkara:- " করতেোয়াম্ সমাব্যভ্য যাবদ্ দিক্করবাসিনিম্।" Some writers place this temple of the goddess near the lake Manash in Tibet. Thus, all these evidences go to prove that Bhagadatta's territory or the boundary of Pragyotisha, where he ruled, extended on the north beyond the Himalayas and included some parts of China.

On the South, Pragyotisha extended as far as the sea. This would be evident from the following passages. In the KiskindhâKânda of the Ramayana we have:- "বোজনানি চতুঃ্বন্ত্রর্ররাহোনাম পর্বত:
 Here we find the reference of the capital called after the name of the kingdom. Where the city was situated will be referred to later on. In the Sabhâ-Parva of the Mahâbhârata, it is described that Bhima went out of Indraprastha eastward, for his conquest and reached the river Lauhitya:-
"बবং বহবিধান্ ఢেশান্ বিজ্রিত্য পবনাছ্ছজঃ
বস্থচ্তভ্য উপাদায় লোহিত্যমগসমদ্ধনী

কর্মাহার্রামাস র্পানি বিবিষানি $\overline{\text { । }}$
When Bhagadatta attended the Rajasuya sacrifice of Yudisthira,
 that is with the Malecchas, who dwelt on the sea-coast. The above words অগাধ্বক্রণান্যে and সাগরাঞ্ণ all indicate the fact that Bhagadatta's territory stretched southwards to the sea. The tracts near the sea must have been the low land on the mouth of the river Brahmaputra, on its either banks. This tract is probably represented by modem districts of Dacca, Tipperah and Chittagong.

So far we have been able to draw a rough sketch of the boundaries of Pragyotisha on the north and south, and these have been possible only because on both these sides, there were natural barriers beyond which further extension was hardly possible. Truly enough there was not and could not be a well-marked geographical boundary of the territories of ancient India. There were no international laws to prevent the aggression of the neighbouring kingdom. So the boundaries were always shifting, and it rested only in the hands of a powerful monarch to place his boundary stone on the exact limit. So was the case with Pragyotisha. Her boundaries on the east and on the west are not so easy to locate. However, we may hold that the western boundary extended up to the river Kârotoyâ. The Jogini-Tantra says:-
"করতোজ্রাম্ সমারভ্য যাবৃ দিক্করাািিনিম্



When Hiuen-Tsang went to Kamrup in the year 643 A. D. he had to cross the river Kalato, i.e., Karatoya. This Karatoya remained as the western limit even after the reign of Balavarmâ to whom may be assigned a probable date as late as $1000 \mathrm{~A} . \mathrm{D}$.

On the east, the territory was not far extensive. It only reached the river Dikshu which, no doubt, is the modern river Dikhou in the Sibsagar district. "启" in the Bodo language means water and Prof. Sylvan Levy, in his ' Pre-Aryan and Pre-Dravidian Race' says that "oh" signifies "daughter of the mountain." 'Khn' means a
mountain in the Bodo language. 'Khn Bamuni' is a mountain in the Mikir Hills near Dimapore. The mountain is styled in the Bodo language and the words mean the Bamuni Parbat. Hence the word Diksu or Dikhou mean "The watery daughter of the mountain." Thus if we take Diksu or Dikhou as the eastern limit of Pragyotisha then evidently part of the modern district of Sibsagar was known as Kamrupa, and the whole of the Lakshimpur district known as Namarupa, fell outside the Pragyotisha. That there were commercial communications between China and Pragyotisha, we have already referred to above. Not only that, some people of Mongolian blood came here from China and Burma and settled in these tracts. These foreigners identified themselves with the native inhabitants and formed a distinct race and established a separate territory of their own, on the further side of the river Dikhou. They named their territories as Namarupa and Kamarupa, both of which mean that whosoever entered their territories had a new life-a complete change of the old mode of life. Some interpretation of this new life may be adduced here. The people of these tracts were certainly Buddhists whereas those of Pragyotisha were orthodox Hindus. So it was believed that any one who crossed the river Dikhou had to change his religion and thus enter into, a new life. Of these two Mongolian territories Kamrupa was predominant and as we will see later, Kamrupa, now a mere territory, extended to be a large kingdom. Scared by the thought of dwindling Hinduism, the Hindus, shrewd readers of human thought, as they were, soon turned the name into good account and a fresh anecdote was made to hung round it. Kamrupa thus came to mean the rebirth of Kamadeva from the smouldering ashes to which the inflammed wrath of Mahadeva reduced him. When the Aryan influence dwindled away in Pragyotisha, the Ahoms, a Mongolian race, who had already established their supremacy in this part, seized this golden opportunity and brought Pragyotisha under their direct control. But still a strong animosity existed between the inhabitants of either banks of the river Dikhou. The orthodox Hindus of the other bank, which is now called lower Assam, resented and rebelled from time to time. It was only for their strong resistance, that the Ahoms could hardly stretch their territory far beyond the river Brahmaputra. The Hindus of this part endeavoured their best to build a Hindu kingdom, and finally they
succeeded in establishing Koch Behar. The buffer state of Koch Behar soon disappeared through the constant attacks on opposite sides by the Moguls and the Ahoms.

Above we have given a suggestion of the origin of the name Kamrupa, and let us now see how and when Kamrupa came to mean Pragyotisha. In the earlier literature we have no reference to Kamarupa. The earliest reference to Kamarupa occurs in the Allahabad pillar inscription of Samudra Gupta of the $4^{\text {th }}$ century A. D. Kalidasa, whose probable date is assigned by the scholars to be the first half of the 5 th century, mentions Kamrupa in his work and identifies it with Pragyo. tisha. The name Kamrupa is certainly of a later origin. Professor Levy in his book referred above, gives the fuller etymology of the word Kamrupa in the following words. He writes, " The word Kamrupa, considered from the standpoint of Sanskrit, is a regular compound in current use, of which the meaning is perfectly clear; Kama=desire, Rupa=form. The association of the two words is not at all strange as the Buddhist casmology distinguishes in the universe, the world of Kama,-kamadhatu, and the world of rupa-rupadhata. The use of the term Kamarupa in literature constantly indicates the faculty of metamorphism at will. " The same author referring to the etymological meaning of the name Namarupa applied to the tract mentioned above, which means name and form, concludes, " the philosophy of the Upanishad is out of place in the wild corner and the metamorphosis still more so in Kamarupa. We have here barbarous names." We do not know whether philosophy had anything to do with the inhabitants of this tract, but in spite of it they could not be called irreligious or barbarous. Common people uphold religion without investigating philosophy, which lies behind it. The people of this tract, referred by Prof. Levy, could not be barbarous in the strict sense of the term, at least in the period when the names Kamarupa and Namarupa had come into existence. We have already emphasised that the people of this region took Buddhism at an early date. It is interesting to note here, that Buddhism entered into Assam from China and not from Maddhyadesa or middle country. Moreover, Assam did not receive the early Indian Buddhism, i.e., Hinayanism but a debased form of Mahajanism with the cult of Tara, prevailed in the province, which afterwards took the form of Tantrikism. Col. Shakes peare, who stayed for many years in the district of Lakshimpur,
observed in his account of Upper Assam, that there are many stone images of the ancient gods still lying, which may be rightly identified as those of the Buddhas and of the Bodhisattas. In this district there are still many Buddhists belonging to the hill tribes, namely, Khamtis and Misimis. These people have preserved the Pali version of the Buddhavasana in palm leaves. Unless all these materials are collected and a severe scrunity made, we can never be certain about the exact civilisation of these people of that period. All these have been said here to make it clear, that these names are most probably of Buddhistic origin. The Mongolians, who were newly converted to Buddhism, came and established themselves in these tracts. The new converts, with all their enthusiasm, zeal and veneration towards their faith used some wellknown epithets from their sacred text, as names for these new colonies. At the time of the introduction of these names, the exact connotation of the terms was slurred over. But later on, the clever Brahmins who knew when to strike and where to stand invented ingenious interpretation of these terms. They cleverly showed this region as a part of Pragyotisha, and thus made their way accessible to this land of the Mongolians.

That Kamarupa was once a small tract, can be ascertained from the following facts. In the Gauda Lekhamala of 1200 A.D. we
 Pragyotisha is named as a Bhukti, and Kamarupa as a Mandala. The connotation of the term Bhukti, Mandala and Visaya are defined by scholars as divisions, districts and sub-districts respectively. Hence Kamarupa was a Mandala or district in the Pragyotisha Bhukti. Again, in Raghu's conquest referred to above, we find:-

एকব্পে তীর্ণ ন্ৗীছিত্যে অস্মিন্ প্পীগ জ্যোতিনেেশ্রঃ
তমীশ: কামক্রপানামত্যা মণুল বিক্রমম্।
That is, Raghu first crossed the river Lauhitya then reached Pragyotisha and after that Kamarupa. It may be said here that Lauhitya, does not mean the river only, but it also refers to the Lauhitya Janapada, which flourished on the west bank of the river. Collecting all the stray references, we may conclude Kamarupa was once a Mandala on the east of the capital, Pragyotishapura. The kingdom of Pragyotisha,
oppressed from all sides, especially from the rising power of the new Kamarupa on the east, dwindled away, leaving behind it the remnant of its old capital Pragyotishpura. Pragyotishpura remained as the capital of the new Kamarupa at least to the reign of Bhaskar Varma, i.e., to 700 A. D. But after Bhaskar Varma there was a revolution, and the suzerainty fell into the hands of the Mleccha kings of the Sala Stambha Dynasty, who shifted their capital to Hárrupeshwara, i.e., modern Tezpur.

When the kings of this line were extinct, the people placed Brahmapal, who traced his origin to Naraka, as their king. Ratnapal, son of Brahmapal, to please his subjects, removed the capital to Durjjaya near the old city of Pragyotishpur. It is very difficult to locate, where this Durjjaya was situated; perhaps it was built on the ruins of Pragyotishpur.

In the copper plate of Dharmapala of izoo A.D. we find:"কামর্রপ নগররে নৃপৌভবৎ ধর্মপাল ইতি।" This shows that during this time Kamarupa was the capital city and not Durjjaya or Harrupeswar. From the evidences of this copper plate, we may conclude that the city of Kamarupa was situated far away from the river Lauhitya ond probably on the bank of the Karatoya. Some scholars suggest that this Kamarupa changed its name to Kamata, an important city of a later time. The ruins of Kamata may still be seen in Koch Behar. Sir Edward Gait in his History of Assam, writes, " The whole tract up to the Karatoya seemed still, as a rule, to have formed a single kingdom, but the name had been changed from Kamarupa to Kamata. The Mahomedan historians sometimes speak as if the terms, Kamarupa and Kamata, were synonimous and applicable to one and the same country, but on other occasions they appear to regard the terms as distinct."

However, at times the name Kamarupa did not signify the capital city only, but represented almost the whole territory which was formerly known as Pragyotisha. But here we may say that this kingdom of Kamarupa excluded some parts which did really belong to Pragyotisha once. In the Allahabad pillar-inscription of Samudra Gupta we have five references of frontier territories, who paid tributes to the Gupta Emperor, namely, Samatata, Davaka, Kamarupa, Nepala, Kartripura. Of these five territories Davaka has not been satisfactorily
identified till now. Vincent Smith is of opinion that modern Bogra, and Dinajpur had comprised this Davaka. But this identification is doubtful. Recent discovery of an inscription and traces of old ramparts found in the district of Nowgong has drawn the attention of the scholars to the tract-known as Davaka. This place is on the bank of the river Kopili, a large tributary of the Brahmaputra. The scattered images and the old ruins of this place do really remind us of an ancient civilisation which once flourished there. One of the copper plates of Harjarvarma of 900 A. D. was discovered in this tract in 192I. Moreover a stone slab found in this place a few years ago, bearing inscription of which the following are deciphered:- आরাম, শাস্ত্রশ্サN শালা, (হে, মাণিক and দেবব্রত had helped us to advance this theory of ours one step forward. Vincent Smith mentions that during the reign of Emperor Kumar Gupta, circa 428 A. D., Yueai (Moonlove), the ruler of Kapili country, sent an embassy to China. This Kapili had been identified by Vincent Smith to the Kapili-Jamuna valley of Nowgong, which is still inundated by the Jamuna and the Kapiliganga. Ganga is no doubt always used as synonym for a river. Davaka to which we have referred above, is situated in the Kapili valley. Thus we have reasons enough to identify Davaka of the inscription with that of Davaka of Nowgong. If this identification of Davaka is correct we can reasonably conclude that Davaka and Kamarupa existed side by side during the time of Samudra Gupta, as frontier territories. But this Davaka was afterwards absorbed in Kamarupa and thus in Hiuen Tsang's account Kapili valley is included within the kingdom of Kamarupa.*
*The writer is greatly indebted to Dr. H. C. Ray Choudhuri for the valuable suggestions received from him.

## EINSTEIN AS HE IS KNOWN TO-DAY

Sushil Chaudhuri-Third Year, Science.

NEARLY half a century ago, a four year-old child in a poor German family named Albert Einstein celebrated his birthday and received amongst other presents a magnificent compass. This simple compass fascinated the child so much that he threw aside his other toys to the amusement of his parents who little guessed that the young child Albert was going to become the man Einstein, the greatest scientist of modern times.

There was nothing in the history of the famous scientist's family to suggest that it would produce a world famous son. Albert's father was not a very good electrical engineer, and apparently a very poor businessman. He preferred music to magnetism-his son is equally fond of both. Einstein has recalled being taught elementary Algebra by his father. As he understood the Science, it was "a lazy kind of Arithmetic. What you didn't know, you called X and then looked for it."

His wonderful talent for mathematics was shown quite early. At a time when most children are reading fairy tales, Albert's favourite was Euclid. But there was nothing priggish about the boy. In many a subject he was backward and this was possibly why his teachers never appreciated his brilliance. His career in school was ordinary and interrupted at intervals when the father moved from place to place to try his luck anew. But when Einstein had reached his fourteenth year, he was a master of mathematics and asked his teachers embarrassing questions-not the pert questions of the "clever child," but difficult problems which he had deduced from the Geometry he had learned.

As far as mathematics was concerned, Eintein was undoubtedly a prodigy. He was poor at languages and good at music, his instrument being the violin. All the time Einstein was working on his problems. It is worth noting, that even as a student, he actually wanted to measure the earth's movement in relation to ether, an
experiment which was actually performed in America and became famous as Michelson's Experiment.

A period as professor at Zurich was not altogether congenial to Einstein and he obtained a post in the patent office. Probably he did not care for the routine work very much, but his wonderful brain enabled him to get through it quickly, and he could then spend the remainder of the day with his beloved calculations-working under the lid of his desk, so that they could immediately be covered if his superior came in!

Under these conditions, Einstein formulated the famous theory which astounded the scientific world. The fundamental principles were formulated in 1905. Einstein said in effect that Space and Time cannot be reckoned separately. His principles are not, as is often supposed, a scrapping of old fundamentals, but an addition to them which explains their apparent incompatibilities and clears away many prejudices.

Einstein did not wake up to find himself famous. Thirty years ago mathematics was not considered " news." Probably the public first began to take notice when eminent astronomers tested Einstein's theory by measuring the deflection of a fixed star during the solar eclipse. This was something that even the school-boy could understand, and Einstein, to his own amazement, became eagerly sought after by society. The publicity he received must have made film stars envious, but the fact that it was not merely the world discovering a great personality, was shown when the great New York Library had to set aside a whole room for readers of books on relativity-and even then have a long line of readers awaiting admission.

Throughout the War, Albert continued his labours. His general theory was published in 1915 and other important works in 1916 and 1917. It would be wrong to say that he was unaffected by the struggle in the world outside. He was profoundly grieved. Probably no man realizes the folly of war better, and Einstein realised it at a time when the rest of the world was obsessed by bitter materialism. To-day he is a famous scientist and a famous man who hates all the funs that the world makes of a genius. He spends his holidays in retirement at his own home. The over-boisterous welcomes he has

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 PRESIDENCY COLLEGE MAGAZINEsometimes received on his birthday have taught him the wisdom of locking himself alone in his house and getting his own meals. His birthday post is delivered in a number of laundry baskets, and his well-wishers range from kings and professors to humble men whose whole life and philosophy have been changed by his theories. For a fiftieth birthday present, Einstein received a yacht, and his favounte pastime is sailing. it on the quiet waters near his country house on Caputh, where the lights and bustle of Berlin seem far away.

His hobby is still music and he is no mean performer on the violin. His services are much in demand for charity concerts, objects, that bigness and swiftness are purely relative. The quest only twelve men who can understand the mathematics of his Theory The music critic wrote of him in the local paper-" This man Einstein is not bad, but there is nothing in his playing to justify his world-wide reputation!" The fame of Einstein the mathematician had not spread to that place!

What does he mean to the ordinary man? There are said to be only twelve men who can understand the Mathematics of his Theory. Einstein means a great deal to thousands who cannot understand his higher mathematics. We imagine that he has taught us that Space and Time cannot be separated, that events are more important than objects, that bigness and swiftness are purely relative. The quest for a universal formula that will bring all things into unity has fascinated philosophers for centuries. Einstein has brought the fulflment of that question one step nearer.

Our appreciation of Einstein's theory may be limited to acknowledging that an hour spent in pleasant company is shorter than an hour spent in a railway station waiting room. We may sum up our view of the theory like the little girl narrating her first journey in a lift-" We got into a little room and the upstairs came down." Sooner or later, Einstein will affect us in some way. In a world of crashing faiths he may give us a new grip on things. The mathematicians rightly call him "the greatest man since Newton." His admirers call him " the greatest Jew since Christ."


Sir Bffin krashan Bomit

## GOLD FROM MERCURY

Sailen Sur-Second Year, Science.

SCIENTISTS, from time immemorial, have been trying to discover a method or a substance by which baser metals can be transmuted into gold. Hindu scientists believed that there was a substance called " philosophers' stone" which when made to come in contact with baser metals, such as iron, etc., would turn them into gold. The chemists of the Middle Ages, or Alchemists, as they were called, wasted great efforts to turn baser metals, such as lead, tin, etc., into gold or at least into silver. They believed that metals were compounds of mercury or quicksilver with sulphur and other earthly impurities, and that gold being the noblest of all metals consisted only of clear mercury and sulphur and was free from any earthly impurities, whatsoever. Taking their stand upon this idea they wasted great energy to purge the baser metals of the impurities they contained by heating them in retorts with substances that were calculated to remove these impurities ; but their greatest effort could prepare substances only similar in colour to gold. This explains why the word " alchemy" has come to mean not only " Chemistry of the middle ages" but also the pursuit of the transmutation of baser metals into gold.

However, the Alchemists and Hindu scientists are gone, and alchemy and the "philosopher's stone" are now in disrepute. But their idea of turning baser metals into gold has given an impetus to modern scientists for further attempts in this direction. But the path by which the latter are marching towards their goal is quite different from that followed by the Alchemists or Hindu scientists. They have been trying to find neither the "philosophers' stone" of the Hindus nor the method by which the earthly impurities can be purged off from the baser metals, but, having known everything about the composition of matter and having studied carefully the theory of transmutation, they have been striving hard to apply their theoretical knowledge to practice. According to the modern theory of the composition of
matter advanced by Sir J. J. Thomson and Lord Rutherford metak (as well as non-metals and metalloids) are now-a-days considered not as compounds of mercury with sulphur and other impurities but as consisting of atoms having electrically-charged particles, called protons and electrons. The protons have positive electric charges and the electrons negative, and in a neutral body the sum of the positive charges is equal to the sum of the negative charges.

The way in which the protons and the electrons are associated with each other is very interesting. In every atom, a " nucleus" of protons and a smaller number of electrons is formed, while the remaining electrons revolve round the " nucleus" continuously. The mass of an electron is very very small-it has a mass $1 / \mathrm{I} 845$ of that of an atom of hydrogen-the lightest substance known. But very light and tiny as the electrons are, they play an important part in determining the chemical and the physical properties of different elements. In fact, the properties of an element are directly dependent on the number of those electrons which revolve continually round the " nucleus." The number of these revolving electrons is known as the "Atomic number." Now, an atom of gold consists of I97 protons and an equal number of electrons. All the protons and II8 of the electrons go to form the " nucleus," while the remaining 79 electrons revolve round it in a series of orbits. The difference between an atom of gold and an atom of mercury is that the latter contains 200 protons and an equal number of electrons; each of the protons and I 20 of the electrons from the " nucleus" while 80 electrons revolve round it. Now, since " Atomic number" is the number of electrons revolving round the " nucleus" of an atom of an element, the atomic number of gold is 79 and that of mercury is 80 ; and if by any means the extra electron in every atom of mercury could be knocked out, gold would be formed. But to knock out this extra electron requires tremendous shock and, unable to administer this tremendous shock, scientists could not prepare gold until 1924, the year in which a German scientist Prof. Miethe announced that he had actually prepared gold from mercury to the utter astonishment of the scientific world. Prof. Miethe had been doing some experiment with "Mercury vapour lamp." In the experiment, an electric wire was passed through mercury vapour and after passing it for several hours

Miethe noticed that some black coating was forming inside the vessel containing mercury. He analysed it and found that it contained certain amount of gold. Thus, it was the violence of electric discharge that knocked out the extra electron in every atom of mercury and transformed it into gold.

This fact may lead many a casual reader to think that the " goldproblem" of the world may thus be solved! But there is much doubt expressed by leading scientists as to whether elements can be transmuted at all. Sir William Tilden, F.R.S., in his book writes, ' These observations led not unnaturally to the idea that under the influence of electrons from radio-active matter some of the common elements might be broken up into fragments so that, for example, copper might be degraded into sodium and lithium.' Experiments announcing this change were published, but other chemists could not get the same result, and at the present time the general opinion would not be in favour of such a conclusion.

Somewhat similarly, it has been asserted by Professor Collie and Mr . Patterson that the cathode rays are capable of producing helium and neon out of gases and other matters in which they are believed not to exist as such, that is to say, by disintegration of one kind of atom, other kinds are produced. But the same effects are not always producible even by the original observers, and by others, are altogether denied. In such cases there is no alternative but to "wait and see." From this it would appear that gold is not obtairable from mercury at the sweet will of the scientists. Also, since preparation of gold in such a way costs much more than extracting it from mines, this method cannot be employed for obtaining gold. These are the two main difficulties which confront mankind in solving the "gold problem" in such a way.

Be that as it may, we may hope that, as scientists never sit idle, there will come a time when an apparatus will be constructed by which gold will be "t manufactured" more cheaply than now. And our hope is not a mere dream-for messages have come from the Far East that the Japanese have been able to obtain gold by a careful repetition of the process employed by Prof. Miethe.

# HOW LIFE RESPONDS TO SOME GEOGRA. PHICAL \& GEOLOGICAL FACTORS* 

Professor B. Maitra, m.sc., b.l.

TI is known to all that the type of plant in any locality depends to a very large extent on the climate of that place. For example cocoanut is characteristic of a moist tropical climate; date-palm of a dry hot region. The reason is that plants need moisture and air at its root, and any variation in their supply would affect the plant. Moreover, both plants and animals require sunshine in order to thrive. We, therefore, find that in the tropical regions where there is rain almost everyday, and the supply of moisture rather too great, plants develop large leaves, from the surface of which considerable quantities of moisture may evaporate in a comparatively short time. This is necessary, for otherwise the roots would be water-logged and the plant would die for want of the requisite quantity of air at its root.

Where, however, the supply of water from rain is not continuous throughout the year, but occurs only for a short period, we get only grass growing. For, grass takes a comparatively short time to develop and produce seeds for germination during the next rainy season. Again, if the period of rainy season is comparatively long, certain trees would be able to grow and produce seeds. The peculiarity of such trees is that they have leaves which develop to comparatively large sizes during the rainy season. But after the rainy season is over they would shed their leaves, when the supply of water begins to fall short, and thus stop most of the loss of water through evaporation.

But in regions where the supply of water is very small throughout the year, e.g., in desert regions, vegetation is characterised by the presence of spines instead of typical leaves, and the arrangement is such that there can be very little evaporation either from the stem or the spines.

We also know that there are several factors on which the climate of a place depends, e.g., latitude, nearness to the sea, etc. One of

[^3]the most important of these factors is the relief of the land. If we proceed up the slope of a high mountain we find, in succession, types of plants which we see if we proceed from the equatorial to the polar regions. Thus the vegetation is, to a great extent, influenced by relief of land.

Similarly, the animal life is directly influenced, to some extent, by climate and relief, and to a great extent indirectly through vegetation. In dense tropical forests, where the foliage on the high branches of trees touch and prevent the sunshine from reaching the ground, no smaller trees can exist for want of sunlight. Life that can exist in such jungles must be able to gather food from the high branches, and we find there insects, birds, monkeys, etc. In grass lands, grazing animals, such as antelopes, zebras, etc., exist side by side with wolves, tigers and other carnivorous animals which prey on them. The former being often attacked during their meals, have got accustomed to swallow enough food in a hurry, and to chew the cud at leisure when in a safe place. On the other hand, animals, like the camel, which are adapted for desert regions can take in a large quantity of water, utilise only a small quantity and keep the rest in reserve for future use. Often such animals have a hump in which they accumulate a store of fat which supplies to the body the necessary food when it is not available from outside.

With man the case is different. If the environment becomes unsuitable for a particular type of vegetation, it would become extinct. Animals, under similar circumstances, would migrate to more congenial surroundings. But man would not readily give way. He would first try to control the conditions in which he finds himself, for example, if the winter is very severe he would make for himself warmer houses and clothing, light fires, and thus pass the winter without inconvenience. But even then he would be influenced to a very great extent by Nature-his constitution would be moulded in some cases, his occupation, mode of living, or his movement would be affected in other cases.

Land surface is cut up into hills, plains, and valleys by the agency of running water. Let us see how man is influenced by this reliefthis variation in physical features.

The atmosphere, like all other gases, would occupy less volume if subjected to higher pressure. As the lower layers are subjected to the weight of the upper layers they are denser than the latter.

In the thinner air on high mountains the oxygen content is correspondingly smaller, and, as compared to the plains, a greater volume of air would be required to supply the amount of oxygen necessary for supporting life. Hence we often find that hill-folk are more broad-chested than plainsmen-a greater capacity of the lungs being necessary for taking in the larger volume of air.

It has been observed that when a man first goes to the hills, his appearance becomes ruddy in a short time. This is another illustration of the attempt of the constitution to adapt itself to the ner conditions, by manufacturing a greater number of red blood-corpuscles which absorb oxygen and carry it to different parts of the body where it may be needed. On return to the plains, when this excess of red corpuscles is no longer necessary they would be transformed and the appearance would become normal in a short time.

Soil is formed by the distintegration and decomposition of rocks. On mountains the soil is very easily removed by water which has greater carrying capacity when running on slopes. The thin soil that remains is not suitable for the growing of crops. Moreover, it is either too sandy or too sticky according as it is derived from acid or basic rocks. On such places grass grows on the thin soil and the usual occupation of the natives would be sheep or goat farming.

In the plains, on the other hand, a thick soil is formed by the deposit of the materials brought down from the hills. Moreover, tributaries bring down materials from rocks of different chemical composition, and the mixed soil thus formed is not only rich in plant food but has enough sand to make it sufficiently porous. Therefore, agriculture is one of the chief occupations of man in the plains. This is an instance of the occupation of man being influenced by the relief of land.

The density of population is also affected by relief of land, for it is much greater on the plains than on the mountains. On account of the absence of level stretches of land on mountains, it is not possible to build houses quite so close together as we have on the plains.

Moreover, there are other kinds of inconvenience attached to living on the mountain. In the plains, it is possible to go straight in any direction avoiding steep gradients. The cost of construction and maintenance of pathways and railroads would, therefore, be comparatively small, and thus there would be greater facilities for travel and transport which would be both cheap and quick. Even aeroplanes, which fly, are more adapted to plains as the aerodromes require a large area of level ground. In the mountains, on the contrary, the cost of transport is much higher and communication is not quick or easy. This is partly due to the difficulty of constructing roads which wind about and partly due to the frequent repairs which have to be undertaken on account of damages done by landslide and the action of running water. Again, transport is much more slow on the steeper gradient and vehicles have to be 'scrapped' sooner on account of the greater wear and tear on them. For this reason in some mountainous regions, meat, which is local, is quite cheap ; while bread is an expensive luxury, for the flour has to be brought from a very great distance.

The poverty of mountain people and this difficulty of communication make them somewhat backward in point of civilisation, and also lawless to some extent. At the same time, they are bolder, for they often meet with wild animals in their hunting excursions and have sometimes to pass a night in the woods. "Familiarity breeds contempt." In the last Great War, it was found that Gurkha soldiers made the boldest raid right into the German trenches. It is natural that the poorer mountain people would envy the richer plains-men and when they are pressed for want of food they raid the plains. The raids of the highlanders on the lowlands of Scotland as well as the invasions of India by Tartars, etc., may be traced to this cause.

But with all these drawbacks mountainous regions have ordinarily a healthy climate and a charm of their own and this attract the plainsmen. During holidays, people often go to Darjeeling, Dehra Dun or Simla, as we see people of Europe going to the Swiss Alps for recreation or change.

We have just examined in some detail the different ways in which man is influenced by relief of land. We shall now see how man is affected by location.

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In regions, shut off from the rest of the world by impassable barriers such as oceans, deserts or steep snowy mountains, the scarcity of food often induces man to put some check on the increase of population. In some places, women are encouraged to become nuns, or a system of polyandry prevails. In others, female infanticide is practised. We find from the annals of Rajasthan that it was not very uncommon in that desert region. In Arabia where polygamy is permitted, the taking of more than one wife is not very common. In some islands, cannibilism prevails. These are instances where man has been influenced by the disadvantages arising out of the location of the particular country.

People living on the sea-coast naturally take to fishing as a means of livelihood. The Nulliahs of Puri and Madras coasts may be cited as common examples. If the coast line is very much broken then in going from one place to another, it is often easier to cross a stretch of water than to go by a round-about land route. In such places if there be natural harbours then the natives would always be good sailors. Though in respect of population and commerce Norway is one of the least famous states of Europe yet it has a good mercantile shipping, and Norwegians have been renowned as bold seamen throughout their history. The reason is that the coast of Norway is broken up by many fiords which also serve as very good natural harbours.

The English people are good sailors for the same reason. As England is an island very near to the continent, it is very liable to attack and that by sea only. Therefore, it has naturally developed a strong navy for protection. In islands an increase in population gives rise to a food shortage, and this, in the case of England, imparted a spirit of colonisation.

There is no doubt that the ocean isolates a country to some extent and India has been protected from invasion by the presence of the ocean on three of its sides. But the ocean is also a link and a highway for cheap transport. Railroads are more expensive both to construct and to maintain than large ocean liners. So transport by railway is much more costly. We sometimes find that Canadian wheat is cheaper in Bengal than Punjab wheat, though on the former, cost of ocean transport over several thousands of miles have been paid.

The movement of man and growth of towns depend upon several factors, one of the most important of which is the presence of large
deposits of gold, iron ores or of any other economic mineral. Iron is necessary for manufacture of machinery of various kinds, but coal and petroleum are also of very great importance as they supply the power that is necessary for working the machinery. Large numbers would be attracted towards these deposits as many men would be working as miners, and others would be opening shops to supply the needs of the former. Thus the important town of Tatanagar has quickly sprung up in an unfrequented spot simply on account of its nearness to large deposits of iron ore, coal, etc. Kodarma has become important on account of its mica, but there was not even a village worth the name when our college excursion party visited it 25 years ago. Australia was almost unknown before gold was discovered there. Many other examples could be easily cited. In this connection it may be mentioned that a large portion of Germany's mineral deposits occurs near its border. This is one of the chief causes of German militarism.

Delta formation is another factor which causes movement of man. For not only is the newly formed land gradually brought under occupation and cultivation, but the silting up of the original port causes new ports to spring up nearer to the new mouth of the river.

Even such phenomena as volcanic eruptions influence man. The fine 'ashes' formed by explosions fall only at a short distance from the volcanic vent and form a loose soil rich in plant food which is excellent for growing crops.

I have considered one of the factors in detail and have mentioned a few points in connection with several others. Another very important factor which influences human life is climate. As I have already taken a long time I will leave the students to study this interesting subject along the lines indicated before.

## IN MEMORIAM

## Gauri Sanker Chatterjee-Second Year, Science.

DEATH is the inevitable end of all life. The only law to which all must equally bow down in this world is the law of death. No excuse or explanation can put off the terrible summons. But when we mourn the loss of some one dear and near to us, we forget the grim truth that man is born to die. To us, it seems, as if God's justice is not impartial. We accuse Him as being responsible for our eternal separation from our friend. We think as if the laws of the universe hasebeen made with the only object of bringing sorrow and suffering to us.

To-day, when we miss our friend Jitendra Narayan, we find no word of consolation. Even if our young Jiten has been summoned to satisfy the wishes of our Almighty Father we have not the strength to submit to what He has given us. "Thy will be done" is a prayer that is too difficult for us to utter. We are too selfish and blind to see the wisdom of bearing humbly the burden of sorrow that He has imposed upon us. The smiling face which reflected the equally tender heart he possessed, is to be seen no more. We are so stunned that we do not yet realise that he has gone for ever. He was as favourite of his teachers for his scholarship as he was well-known among his friends for his generous and lovely nature. But to those who have come in closer touch with him, he appeared to be possessed of a heart full of kindness and purity, and also as one who was the proud child of his widowed mother. Let us pray to God to give us the fortitude to bear his loss, so that His will may be fulfilled through this faithful servant of His, whom He , as the Great Taskmaker, has called to His own service.


Jitendra Narayan Ray

## A FEW HEALTH HINTS

## Mr. S. C. Sen, m.a., b.L., Physical Instructor.

IN order to live a hygienic life, body should be supplied not only with fuel in the form of 在olesome food, but it is also necessary that for the assimilation of such food, body should be at times active and at other times be inactive.

There are two forms of activity, work or play (including exercises) and two great forms of inactivity, sleep and rest. All these are needed in healthy life and in due relation to one another. It is distinctly unhealthy to overdo or underdo work, play, rest or sleep. In order to keep fit, moderation in all things is the watchword.

The remedy for the idle life is to find some useful work which will inspire real interest and enthusiasm. "Normal work is the greatest blessings of life." Variety of work is needed in modern times when specialisation tends to lead men to extremes. Changes in work, which prevents a sense of monotomy, will greatly increase the power to work.

Common defects in our youngmen due to overstraining of eye by reading in bad lights or looking for a longtime at moving pictures can only be minimised if they are careful not to read in a waning light or in the glaring sun. To offset the evils of sendentary life it is advisable at least to spend half an hour daily or 15 minutes at best in some kinds of vigorous exercise.

For home exercise, simple stretching in bed when one wakes up combined with breathing exercises is helpful. The most beneficial exercises, as a rule, are those which stimulate the heart and the lungs, e.g., running, rapid walking, hill-climbing and swimming. These, of course, should be graduated in intensity with varying age and varying degree of vitality.

General muscular activities after light meals promote normal digestion and should be practised half an hour after light tiffin; but violent exercises immediately after heavy meals or heavy meals after violent exercises should be avoided.

Health, strength and vitality do not come by chance but by obedience to certain natural laws. Study your health, select at least half a dozen principles which you will obey and hold to them rigidly. Form a dozen correct life-habits. A few of them are of permanent advantage to all:-
(I) Respiration should be deep and full.
(2) Take a few breathing exercises from 3-4 minutes out of door or before an open window upon rising, before retiring and during exercise. Ventilate your room and cover well and sleep with windows open even in winter.
(3) Eat regularly, lightly and slowly of plain food using plenty of vegetables and grains and fruits, if possible. Use variety in different meals. Stimulants are unnatural and unnecessary. Never force yourself to eat. Eat very little when excited or very tired.
(4) Drink freely of pure water between meals. Take a glass of cool water upon rising or before retiring. Have a regular hour for evacuation.
(5) Wait for normal circulation after exercise before a bath but do not cool off before the bath. After vigorous exercises finish with lighter exercises to equalise circulation. Keep the feet warm.
(6) Best time for bath is immediately after moderate exercise. Never take a cool bath when very much exhausted, out of breath, or within two hours after a heavy meal.
(7) Remember rest is as essential as food.
(8) Do not wear tight clothings or belt during exercise.
(9) Practise self-restraint, discipline of the body and mind.

## OURSELVES

## COLLEGE UNION NOTES.

## FAREWELL MEETING.

Before a distinguished gathering, the students, in co-operation with the members of the staff, bade farewell to Prof. Harihar Vidyabhusan on his retirement from service. The Physics Theatre was decorated in the usual oriental fashion and it was packed from corner to corner. Principal B. M. Sen took the Chair.

Addresses, on behalf of the Sanskrit-Pali Seminar, his colleagues and pupils along with a few presents were respectfully offered to our retiring Professor. The President also unveiled a portrait of Prof. Vidyabhusan at the meeting. Many of the guests present at the distinguished gathering spoke in feeling terms about the many qualities of head and heart which Prof. Vidyabhusan possessed. In reply Pandit Vidybhusan made a long speech dwelling at length on his experiences as a teacher specially in this College. Mr. Manoranjan Das, the Secretary of the Farewell Committee, deserves our thanks for his efforts to make the function a success. It must go to his credit that we had such plenty of lively music and sweet songs.

CONDOLENCE MEETING.
A condolence meeting with Principal B. M. Sen on the Chair was held in the Physics Theatre to mourn the death of Sir Bipin Krishna Bose, an ex-student of our College, on the 28th August last. The following Resolution was unanimously passed all standing:-
" This meeting of the staff and students of the Presidency College, Calcutta, expresses their deep and sincere sorrow at the death of Sir Bipin Krishna Bose, who was a student here for 5 years from 1867 to 1872 , who occupied a unique position in the Central Provinces and who by his many-sided activities-specially as the first Vice-Chancellor of the Nagpur University-shed an undying lustre on his Alma Mater."

AUTUMN SOCIAL.
The Autumn Social of the Union will be celebrated on the 17th September next in the Calcutta University Institute Hall. The principal item of the programme will be the staging of Sarat Chandra's " Baikunther Will " and Parashuram's "Chhele Dhara."

Messrs. Hiren Bhanja and Nilratan Banerjea have been nominated Joint-Secretaries and they are working with unflagging zeal and active enthusiasm. Professors C. C. Bhattacharyya and S. Bhaduri are in charge and our popular Principal is rendering every possible help by his valuable advice and willing direction in the work of the Dramatic Club.

The Secretary has the pleasant function to announce that the College Orchestra Party, which had once been a noticeable feature of the College Dramatic Club in the past, is going to greet the audience once more this year when our Autumn Social will be celebrated.

BENGALI LITERARY SOCIETY.
The Bengali Literary Society has been revived with the following gentlemen as office-bearers:-

President-Principal B. M. Sen.
Vice-Presidents- $\left\{\begin{array}{l}\text { Dr. S. K. Banerji. } \\ \text { Dr. U. N. Ghoshal. } \\ \text { Prof. S. Bagchi. }\end{array}\right.$
Secretary-Provat Kumar Ror, Third Year, Arts.
Assti. Secretary-Rabi Majumdar, Sccond Year, Science.
Such in brief is the report of the College Union but before concluding I must emphasise that the corporate life in the College is still suffering a setback at the suspension of the Debating Society. It would be a great pity if this important body is not allowed to function. As a useful supplement to the academic work, debates on various subjects should for a part of the activities of the College. So the Sccretary respectfully invites the attention of our popular Principal to this important matter and appeals that adequate efforts be made to revive the Debating Society under the auspices of the College Union.

Sukumar Choudhury,
Secretay.

## ATHLETIC CLUB.

## FOOTBALL NOTES.

With vigour and enthusiasm we began our footbal season from July 10, 1933. At the very outset our College Eleven defeated the Ripon College in the Inter-Collegiate League Championship. In the same competition we won a glorious victory over the Bangabashi College, the holder of the Hardinge Birthday Shield. The match with the St. Joseph's College was really a contested one.

Mr. Nassim, an international footballer of wide reputation, has joined our team. He is indeed a very valuable asset to our Atheletic Club. Under the able leadership of our Captain, Mr. D. Roy, our games took a better and encouraging turn. In the Elliot Shield Tournament we defeated the Ripon Law, the Medical and Vidyasagar College teams and went up to semi-final where we had to go down to the strong team of the University Law College. But it may be said in this connection, though we do not claim it as an excuse, that we had to field our team at a very short notice, with the result that some of our best players could not turn up.

In the recent Inter-varsity Football Match, Messrs. Nassim and Abbas represented our College and it is really our proud privilege to supply in

Mr. Nassim, the Captain of the Calcutta University team which defeated the Dacca side.

We are glad to note that the staff and students are taking keen interest in our games this year. Our Principal has become a regular visitor to our matches for which we owe a deep debt of gratitude to him. Prof. G. Majumder, our Treasurer, and Mr. S. C. Sen, our Physical Instructor, deserve our thanks for their ungrudging help and guidance.

5. M. A. Majid, Hony. Secretary.

## ECONOMICS SEMINAR.

The second meeting of the Seminar came off on the 18th March with Prof. A. K. Sarkar in the chair. Mr. Amal Biswas read a paper on "Gold Export and India." It was a nice short paper. The writer clearly and briefly stated the inevitable causes of the present-day goldexport from India. In course of his address, he said, "In September, 193n, England went off gold standard. The convertiblity between gold and sterling ceased. The result was that it overvalued gold in terms of sterling as well as rupee and then began the gold-sale. But gold export followed when there was a disparity of the internal and external price of gold because of unequal depreciation of sterling and rupee. The bullion dealers then reaped a profit by the process of transference."

Then an interesting debate followed, in which almost everyone had his share, Messrs. Bhabatosh Chakravarty and Dhiren Roy being the most prominent. As usual, some supported and others opposed. The opposition party maintained that the Government could either put an embargo oni gold or purchase it at the day-to-day market rate. The supporters refuted by saying "If the first course is adopted, those, who want to sell distress-gold will get less price because an embargo on gold will decrease the price of the gold bullion. If the second measure is adopted, the sale proceeds will immediately pass into active circulation resulting in the inflation of currency and weakening the foreign exchange."

Lastly our President very lucidly dealt on the dual aspect of gold export-its causes and possible future. And the meeting terminated amidst cheers.

The third meeting of the Seminar came off on the 18th July. Dr. J. C. Sinha was in the chair. An essay on 'Present-day Economic Situation of Bengal' was read by Mr. S. K. Sen of the Fourth Year Class. The writer pointed out, "The effect of the present-day depression has been keenly felt by that country which is mainly agricultural. Because, prices of agricultural staples have fallen to an extent much greater than that of manufactured products." Agriculture, he continued, can maintain people up to a certain extent, i.e., up to 250 people per square mile. But the density of Bengal is 608 . As a result, unemployment in Bengal is increasing by leaps and bounds. It is the maldistribution of labour which is responsible for degradation in India and Bengal particularly. Manufacture and agriculture should go hand in hand. Mr. Sen then suggested several remedies, viz., (I) establishment of land-mortgage banks
supported by Government, (2) improvement of cottage industries, and (3) the spread of technical education amongst the people.

Many students took part in the discussion that followed, the most noteworthy amongst them being Messrs. Rames Bhattacharjee and Quadri. Mr. Bhattacharjee suggested in addition that Government may take initia. tive in manufactures, e.g., Mysore Soap Factory.

The President, then, summarised the whole thing very nicely and briefly. He pointed out the two aspects of the economic depression in Bengal-the first due to the "world-depression" and the other to the " inefficiency in production." He further added that cottage industry cannot flourish unless markets are hard by. He cited some glaring instances. With vote of thanks to the chair, the meeting was dissolved.

The fourth meeting of the Seminar was held on the 17 th August. Prof. A. K. Sarkar kindly presided. Mr. Ajit Kumar Basu read a paper on " Ottawa Agreement and India." He rightly attempted to show very elaborately that Ottawa Agreement will not help India in the least. He adduced many statistical quotations to prove his arguments. He said "India has to depend largely on other foreign countries besides the United Kingdom for the exports." So " India will not gain anything, rather will lose if other foreign countries impose a heavy import tax on Indian goods as revenge."

In the debate that followed Mr. Sudhir Krishna Mukherjea was the most prominent. Supporting the Agreement, he laid down the standard by which we are to judge, as " what India will lose if she refrained from the pact, and not what she will gain." He pointed out that the export of tea would have suffered an irreparable loss should India remain isolated. For being on the same footing with the tea of Ceylon, she is freely competing in the markets of the United Kingdom. Had the pact not been signed by her representatives, she would have been at a distinct disadvantageous position being unequally placed with the tea of Ceylon not to speak of the keen competition with Java and Sumatra. So also is the case with other countries.

Lastly the President delivered a short and nice speech. He said, "Ottawa is an achievement both from political and economic standpoint. England was losing her empire markets day by day, Japan and U. S. A. being the main competitors. So she tried to have a surer market for her produce. In this respect England has succeeded in her attempt. From political standpoint, it has fostered a close relation between the various dominions: particularly she has satisfied Canada who was going to have a separate trade-alliance with the United States." The meeting was then dissolved with vote of thanks to the chair.

In the last issue of the Magazine, the then editor commented: "Seminars are doing no work." So far as our Seminar is concerned, this is not wholly true for which I have the pleasure to thank my fellowstudents. There have been four meetings already and we expect one or two more. And surely it is not a bad record.

## POLITICAL SCIENCE SEMINAR.


#### Abstract

Prof. D. G. Chattoraj, m.A., presided over the first meeting of the Seminar which came off on Saturday, the 5th August, 1933, at 2 p.m. Sj. Amalendra Narain Biswas of the Fourth Year Economics Class, read a paper on "A Plea for Equality." According to him equality is a prime factor in the foundation of democracy, and unless there is equality there cannot be liberty. He, however, recognised the inequality which will arise out of the natural inequality in ability and merit in mankind. In conclusion he urged that true political equality could not be attained unless there was economic equality. In the discussion that followed a large number of students took part. The President then in a neat little speech, while eulogising the writer of the paper, observed that it was a bit too short and that there was a little digression. The meeting ended with a vote of thanks to the chair.


> Sailendra Kumar Lahiri,
> Secretary.

## HISTORICAL SEMINAR.

The second meeting was held on the 23 rd December, with Prof. D. N. Sen in the chair. Mr. Nikhil Chandra Talukdar read an article on "The Spirit of the Middle Ages." Mr. Talukdar dwelt on almost all the points on the subject laying particular stress upon youth and barbarism, the two characteristics of the age. In the debate that followed Messrs. Sukumar Chowdhury, Krishna Govinda Bose and Nikhilnath Chakravartty took part.

A special meeting of the above Seminar was convened at the Physics Theatre on the 15th July, 1933, when Principal Zachariah of the Hooghly College delivered a very interesting lecture on the "Greek Architecture." Before a fairly crowded house of earnest students, our learned guest unfolded the great marvels of Greek architecture. As an introduction, he began with Egyptian architecture and then passed on to the Greek architecture. He explained the three divisions of Greek architectureDoric, Ionic and Corinthian, carefully distinguishing their characteristics. Next he went on to describe the various architectural glories of Athens -particularly the Parthenon. Along with this lecture a fine collection of slides on the subject was shown with the help of magic lantern. Principal B. M. Sen presided and Prof. D. N. Sen proposed the vote of thanks to our revered guest.

The third meeting of the Seminar came off on the 27 th February with Mr. D. N. Sen in the chair. Mr. Radhika Mohan Sanyal read a paper on "The Renaissance." The writer studied the subjects from all main points of view. Beginning with the origin of Renaissance he described how this purely Italian movement transcended the Alps and struck root in Germany and other European countries, how at last it helped the cause of Reformation. In the discussion that followed Messrs. Jotirmoy Banerjee, Dwaraka Nath Chatterjee and Dilip Sen Gupta took part. Prof. Susobhan Sarkar then addressed the meeting and gave a learned lecture on the subject. Prof. D. N. Sen also spoke on the subject.

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## PRESIDENCY COLLEGE MAGAZINE

The fourth meeting of the Seminar came off on Saturday, the 5th August, with Prof. D. N. Sen in the chair. Mr. Jotirmoy Banerjee read a paper on the "French Monarchy." The attendance though rather thin the meeting was quite a success. The writer went to describe the growth of the French monarchy from its early conception till it reached the zenith of supremacy under Louis XIV. Pointing out the three important features of Gallicanism, Centralisation and Classicism, which the French history owes to the monarchy, Mr. Banerjea appreciated the famous Rhine Policy of the monarch. A hot debate followed in which Messrs. Nabin Chandra Goswami, Rathindra Narayan Ghosh, Imamuddin Chowdhury and Dilip Sen Gupta took part. The debate was keen on the question of Rhine policy. Prof. S. C. Sarkar then addressed the meeting and made clear the debated points. The President also made a brief speech.

The Historical Seminar has perhaps lacked the flourish of her sister organisations. "Verily I say unto you, they have their rewards," said Jesus about the showy public prayers of hypocrites. And many of the College associations had had their rewards. We could not blow the trumpet loud enough. But we must have our "rewards" ton-we must blow hard.

Dilip Sen Gupta,
Secretary.

## PHILOSOPHY SEMINAR.

The Eighth Meeting of the Seminar was held on Saturday, the 22nd July, at 2 p.m. with Dr. N. K. Brahma, M.A., Ph.d., p.r.s., in the chair. Mr. Syed S. A. Masud read a paper on "Science and Philosophy." The essayist dwelt on the following topics:-(a) The general misunderstanding of the functions of Science and Philosophy. (b) The modern fascination towards Science and the shrinking off from the side-chapel of Philosophy. (c) Separate functions of Science and Philosophy. (d) Their relation is not of opposition but of inter-dependence and concluded by saying that the study of Science gives us partial knowledge of reality whereas that of Philosophy makes us embrace the whole of reality. The President congratulated the essayist by saying that it is a very good paper and made some important observations on the subject.

The next meeting of the Seminar was held on Saturday, the 19th August, at 2 p.m. under the presidency of Dr. N. K. Brahma. Mr. Ananda Prasad Singh of the Fourth Year Honours Class read his paper on "The Necessity of Religion." The paper was mainly based upon Caird's "Introduction to the Philosophy of Religion," from which the essayist very often quoted in his paper. The writer concluded his paper by remarking that religion is necessary in the sense that in the nature of man, as an intelligent self-conscious being, there is something which compels him to rise above phenomenal world and to find rest nowhere short of an Infinite, all-comprehending Mind. A discussion took place in which Mr. Syed Mahmmad Ali, Mr. Anil Kumar Gupta and Mr. Syed S. A. Masud took part. The President thanked the essayist with the remark that the essay was a good one and then brought the meeting to a close, with a thoughtful speech on the subject.

Before concluding we cannot but record our sense of great loss at the transfer of our senior professor, Dr. P. D. Shastri to the Rajshahi College in June last. Indeed, his kind and generous personality, his capacity to create an interest in all the subjects he took up, with his occasional reference to his past experiences in the West, and above all his frank, loving and affectionate heart-are too difficult for us to forget. Dr. Mahendra Nath Sircar who comes from the Sanskrit College, has already impressed us with his erudition and we are happy in having him in the staff.

Syed S. A. Masud, Secretary.

## SANSKRIT-PALI SEMINAR.

The First Meeting of the above Seminar was held on the rith March, 1933. Dr. U. N. Ghosal presided and Mr. Birinchi Kumar Barua of the Sixth Year Class, read a paper on 'The Geography of Pragyotisha.' The writer gathered his materials from the Epics and the Puranas and made an exhaustive study of the subject. In the debate that followed, Messrs. Radhika Mohan Sanyal and Dwarka Nath Chatterjee took an active part. Prof. S. Bhaduri made a learned speech. The President while congratulating the writer, made some remarks on the opinions expressed by the writer. Light refreshment was served after the meeting.

On the occasion of the farewell gathering in honour of our professor, Pandit Harihar Vidyabhusan, the Seminar presented an address to him.

The Second Meeting was held on the 25th August, with Prof. Nilmoni Chakravartty in the chair. Mr. Ajay Ray read a paper on "Rig Vedic Civilisation' and dwelt on almost every aspect of the subject. Mr. Nikhil Nath Chakravartty of the Fifth Year History Class also spoke on the importance of the Rig Vedic culture in the history of the world. Dr. Radhagobinda Basak spoke at length on the subject, pointing out some of the inaccuracies in the paper. The President then thanked the writer and made some valuable suggestions on the paper.

> AJay Ray,
> Secretary.

## ARABIC AND PERSIAN LITERARY SOCIETY.

The First Meeting of the Arabic and Persian Literary Society was held on the 8th December, 1932, under the presidency of Professor Sanaulla, m.A., to consider the revival of the said society and to elect the office-bearers for the current session.

The society was organised in the year 1927, and had been working regularly up to 1930. Afterwards, for reasons unknown, it had stopped its activities. Now it is through the efforts of some energetic students that it has been reorganised and is expected to continue its work regularly.

The Second Meeting of the Society came off on 18th December, 1932, with Professor Sanaulla in the chair. Mr. Lutful Haq Chowdhry read a paper on "Spiritual Development," in which the learned writer dealt his subject in appreciative manner and pointed out clearly the ways and means by which one can attain perfection of the soul and get into close communion with God. He laid stress on the necessity of moral and spiritual exercises and also on prayer and fasting. Then followed a keen discussion in which Messrs. Arshad Ali, Imaduddin Chowdhury and Habibur Rahman took part.

Before concluding the Secretary takes this opportunity to express his gratitude to Professor Sanaulla, m.A., who takes very keen interest in the affairs of the Society. He further desires to offer his thanks to his friends to whose hearty co-operation the society owes its success.

> M. Anwaruddin Hasan,
> Secretary.

## GEOLOGICAL INSTITUTE.

The Fifth Ordinary General Meeting was held on IIth March, 1933, in the Geological Lecture Theatre with Prof. W. D. West in the Chair.

Messrs. Nibaran Roy Chowdhury, b.sc. and Taraprasad Das Gupta, m.sc. ph.d. (Lond.), were elected associate members. The following papers were then read:-
(i) " Earthquakes " (in Bengali)-By S. K. Chakravarty of Fourth Class.
(ii) " Corals-the charm of the Tropical Seas"-By H. N. Ganguli of Third Year Class.
(iii) " Evidence of Life in the Indian Azoics "-By G. C. Chattopaddhyaya of Fourth Year Class.
The papers were nicely got up and were much appreciated by all present. The President, Dr. Chatterjee, and others commented on the paper. Tea was served to all present.

The Sixth Ordinary General Meeting of the session was held on the 14th August, 1933, under the presidency of Prof. B. N. Maitra, our vicepresident. Names of Mesrs. Gopal Chandra Chattopadhayaya and C. B. Tiramala Naidu were declared as recipients of two 'Institute Medals., Mr. Anil Mookherjee of the Sixth Year Class, then read a paper on 'Mica.' The paper dealt with the occurrence, characteristics, mining, splitting and manufacture import, export, etc. of the mineral, being based on the author's own observations at the Giridih Mines. The paper was very interesting and much appreciated. In the discussion that followed Profs. B. N. Maitra, M. Chatterjee, S. L. Biswas and Dr. T. P. Das Gupta joined. Tea was served to all present.

An 'At Home' was held on the 19th April, r933, to give a send-off to Prof. West, on his departure for Home on long leave. Many members were present. A decorated casket and an ivory cigarette holder were presented to him on the occasion. Tea and light refreshments were served to all present and all costs were met by private contributions.

Three meetings of the Executive Committee were held during the period.
G. C. Chatterji, Hony. Secretary.
H. N. Ganguli, Asstt. Secretary.

## CORRESPONDENCE.

To
The Edrtor,
PRESIDENCY COLLEGE MAGAZINE.
Sir,
Allow me to express through the columns of your journal, my viewswhich, I believe, is also those of the majority of my fellow-studentsregarding the College 'Socials' which are organised every year. But before I take up my task, let me assure you that I do not in the least mean any disrespect to the organisers of such functions, who work for the College whole-heartedly and without the prospect of any reward.

It is known to everybody that we have a College Union, which, at least in name, arranges these functions. Now, the performance that takes place every year before the Pujah vacation, is managed out of the funds of the College Union, to which every student, rich and poor alike, have to contribute. But we are pained to find that this occasion of enjoyment and happy union is not open to everybody. The function is made a 'Charity Performance' in aid of the Students' Fund in the College, and accordingly tickets of different grades are being sold. The result is that the poor students who cannot afford to waste a single pice, are debarred from joining such a performance, for which the College Union pays. To me, it seems as if the money is not properly spent, and though I do not want to use such a harsh term as " misappropriation," I can at least say this much that a better use of the Union Fund is more desirable.

I may suggest here that in such performances, at least every student of the College should be allowed to enter free. I have no objection to selling tickets to outsiders, who may contribute at the same time to the Students' Fund. Also, a sealed box placed in the Common Room or in the Library or at the foot of the grand staircase, will be a more suitable way of appealing to the students for contributing to such a fund, which surely has the support of everyone connected with the College.

With these words, I appeal to everyone concerned in such 'Charity, Socials to revise their views and organise these functions in a better spirit. Presidency College, Yours, Etc., Calcutta.

Reasonable.*

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RAMMOHUN ROY


Vol. XX.
DECEMBER, 1933.
No. 2

## hotes and hems

INDIA is celebrating to-day the centenary anniversary of the death of Rammohun Roy whose figure stands like a landmark in the past annals of our country. Great men can seldom be seen without each having a mission of his own, but few have appeared on the stage of history with so much to bequeathe to posterity. His advent marks the dawn of the cultural renaissance of modern India simultaneously with its political resorgimento, and perhaps there was no field of human activity in which he did not play the role of a dauntless pioneer. He was not merely a social and religious reformer, but also the political Yugacharya of our land. He was even more: in a sense, we may regard Rammohun as the first and the greatest ambassador that the East has ever sent out to the West. His greatest legacy to the intellectual life of India is the gift of that rationalistic outlook which guides man in the present age. Born in an age full of superstitions, he with his unqualified devotion to reason flashed like a comet across the skies. He hammered every problem on the anvil of his own mind and was never afraid of denouncing or disowning any system, social or religious, which could not stand the test of cold logic. To this Mazzini of modern India let us pay to-day our grateful homage and pray that his unfulfilled message may serve as a beacon-light to our country's march along the path of progress.

Two remarkable personalities in the public life of India have recently passed away. Annie Besant was one of those few Westerners to whom India was not only the field of their life-long activities but also the land of their adoption, though not of birth. A woman of uncommon talents, she worked with a passionate zeal for her only mission in life, the cause of theosophy. India will, however, revere her sacred memory for her services in the political sphere, where she earned the unique distinction of being the first woman President of the National Congress. The death of Vithalbhai J. Patel came as a tragedy which shocked the whole nation. A Kisan destined to be the first Indian Speaker of India's Parliament, his life-story runs like an inspiring romance. The conspicuous ability with which he conducted the business of the Assembly stands as an unequivocal denunciation of the mendacious insinuation that Indians are incapable in the management of responsible government. But the crowning glory of his life was not so much his election to the august chair as his unhesitating resignation of it when the lure of office could not hold him back from joining the nation's ranks. He had within him in full measure a soldier's grim determination to fight and die at his post. Never did he fail to respond to his country's call and to pour out his precious life-blood when that even was demanded of him.

Bengal has lost a poetess of great renown in the death of Kamin Roy who, for more than forty years, enriched Bengali literature with her exquisitely graceful verses. In her poetry, she has given expression to common joys and sorrows of human life with a simplicity of style and a depth of feeling which can be found only among the best of poets. Many of her poems leave upon our mind the impression of a rare imaginative power. The great quality by which she is entitled to our deepest respect as a poet is her originality. A contemporary of Tagore, she did not lose herself in the full blaze of the latter's genius. She welcomed all sorts of influences of that great poet, but to the end she retained her distinctively individualistic note.

With the recent death of Augustine Birrell, there passes away a man of wonderful versatility. In politics, he rose from a backbencher to the position of a Cabinet Minister, who played not an insignificant part in the Irish drama. He was a clever speaker, of whom it may very well be said that in his life, perhaps he has never spoken a single uninteresting sentence. But above all, it is in literature that he has
left behind the abiding marks of his great intellect. As the author of Obiter Dicta he combined wit with brilliance in a manner which might be the envy and despair of many an ambitious writer. The coining of the word "Birrelling" is itself a well-deserved tribute to his fund of fine humour and polished writing.

Presidency College also has to mourn the loss of many of her almuni. Sj. Muralidhar Banerjee, the reputed educationist and social reformer, who was at one time the Principal of the Sanskrit College, was one of our veteran Old Boys. We also record here with a heavy heart the death of Sj. Bhupendranath Roy, a prominent public man of Behala, who was at one time a student of this College. Among our young friends, we mourn the sad death by accident of Sj. Hemen Ghose of the Fourth Year Class. Sj. Satyendranath Chanda of the First Year Class is also no more. We offer our sincerest condolences to the friends and relatives of the deceased. May their souls rest in peace!

Turning to the College Staff, we note a number of recent changes. Many a familiar figure in the College is being missed more and more. Prof. S. C. Sen-Gupta of the English Department was transferred to Chittagong before the Pujah vacation. A scholar of great repute, simple and unostentatious in his manners, Prof. Sen-Gupta belonged to that group of our brilliant ex-students who returned to the College as members of the Staff. During the last four years, he had proved himself to be one of the best and most successful among our young professors, whom his pupils loved and respected in equal measure. The Magazine had in him one of its former editors, who, even as a teacher, has contributed almost regularly in these pages. While conveying our regards to him, let us only hope that we shall soon find him back to his dear old College ere long. We also bid farewell to Professors Nilmoni Chakravartty and Askhoy Kumar Sarkar, who have recently retired from service. Professor Chakravartty spent the whole of his long period of service in this College, during which, as a Professor of Pali and Sanskrit, he earned the respect of his pupils not only for his successful teaching but also for the paternal care which he showed to everyone of them. His great erudition and scholarship, specially his studies in Indology, have gained for him a wide renown. Mr. Sarkar was for a number of years a Professor of Economics here. He was a very painstaking teacher and a man of tender heart whom both his colleagues and pupils will dearly miss. Prof. N. C. Ghose,
our Senior Professor of Mathematics will be on leave till the end of February. Sj. Hiralal Mukherji, our Cashier, is also due to retire in January next, after a long service of sixteen years in Presidency College, prior to which he was connected with the Eden Hindu Hostel and the Hare School. We offer him our grateful regards on the eve of his retirement.

But to miss those who have left the College does not certainly mean that we are not glad to see others come back. Prof. A. K. Chanda has after a long time retruned to his old post as the Head of the Department of English. We hope that the onerous duties of a Principal which he had to carry out so long, first at Krishnagore and then at Chittagong, have not taken out of him that jolly spirit which made him so popular among the students. We also welcome two of our ex-students, Professors Upendranath Ghosal and Asokenath Bhattacharyya. They need no word of introduction from us, since both of them were in the staff until very recently. We only wish to see them stay here this time for good.

It is but natural that Presidency College should feel proud of the success of her distinguished alumni in every walk of life. The recent elevation of Messrs. Nassim Ali and A. K. Roy from the Bar to the Bench adds to the number of Presidency College men among the Justices of Calcutta High Court. Professor Dwarkanath Ghose of the Bombay University, distinguished ex-student of our College, has received the unique honour of being appointed one of the three Indian experts for the newly organised Bureau of Economic Survey of India. The result of the I.C.S. Examination held in London, last August, brings a really happy news for us. Messrs. Karunaketan Sen, Debes Chandra Das and Sukumar Banerjee, who represented Bengal among the successful candidates, all belonged, as usual, to Presidency College. Our hearty congratulations to all of them, who indeed prove that Presidency College, in spite of all its defects and deterioration, can yet comfortably claim to be the premier College of the Province.

The College has not done very badly in the M.A. and M.Sc. Examinations this year. Though we have secured a fairly large number of first-classes, we are unlucky to miss the first places in some of the subjects. While recording our satisfaction at the success of our
candidates we find it difficult to ignore the striking fact that the number of our Post-graduate students is decidedly small. In the list, we notice that a large number of the students who had graduated from our College afterwards joined the University classes but not through our College. The reasons for this are not far to seek. With a fee-rate which is nearly double of that charged in the University Post-graduate Department, but on the other hand, with no additional benefit except the use of the Libraries and the Laboratories, none can have any reasonably fair attraction for admission into the Post-graduate classes here. If the present rate of fees is to continue, and we see no signs of its being revised, we hope that proper facilities for tutorial work, and, if possible, for extra-lectures will be made for our Post-graduate students particularly in the Arts Department.

We publish elsewhere in this issue a correspondence from one of our distinguished Old Boys who, like so many others, feels keenly the absence of an Old Boys' Club in the College. Presidency College has always claimed rank with the leading educational institutions of the West, and as such, she has certainly a number of enthusiastic ex-students who will be very glad to renew their old associations by forging a link with their alma mater. This can only be done if an Old Boys' Club, with an active body of sponsors, be started in the College. The present students are sure to applaud the suggestion, and we hope our ex-students will readily come forward and seriously join hands to make it possible for such an excellent idea to materialise. If the rich traditions with which the name of this great institution is associated are to be maintained and handed down intact from one batch of Presidency College men to the next, then the necessity of such a club can never be exaggerated.

But the establishment of an Old Boys' Club demands as a necessary corrollary the existence of an active College Union for the present students themselves. We do not want merely to repeat what we have emphatically said more than once in these pages that the healthy growth of corporate life in the College requires as a cardinal necessity the revival of the College Union. In spite of the honest and untiring efforts of our Principal to keep alive the social life of the College, we hope we may be excused if we fail to understand why a Union properly constituted should not once more be allowed to function in the College. To run such an institution will itself be an education for the students; in a small scale, it will train their young minds to the duties and responsibilities of public offices.

A few weeks back we welcomed in our midst a Debating Team from the British Universities, which is touring for the first time all the principal Universities in India. Here in Calcutta, they took part in a debate along with the representatives of our University. A visit of this nature, undertaken solely on a mission of good-will, will goa great way to strengthen the ties of unity and friendship among the youths of different lands. We therefore wish that such tours from abroad will, in future, be a regular feature of our University life. We congratulate those who had the honour to represent Calcutta University, and who, by the way, were all Presidency College men, even the Chairman of the debate being an Old Boy of this College.

During recent years, Bengal is gradually losing her position of pre-eminence among the provinces of India. Ever since the days of Rammohun Roy until recently, she had been the cradle of modem Indian culture and progress. And it is not without a feeling of alarm that we view her being steadily relegated to the background in AllIndia affairs. To count among other reasons, the economic distress of the people has mainly crippled the resources of the province. Perhaps nowhere else in India is to be found in such acute form, the problem of educated middle-class unemployment and rural indebtedness. We therefore heartily welcome Sir John Anderson's "Recovery Plan" on the lines of which has been formed an Economic Enquiry Board consisting of the leading economists of the province. Let us wish complete success of the plan so that Bengal may once more be relieved of her present distress.

It was with equally keen interest that we watched the proceedings of the Educational Conference recently convened in Calcutta. There has been a growing complaint, which is not entirely without foundation, that the standard of education in Bengal has greatly deteriorated, which mainly accounts for the poor show that our candidates make in All-India examinations. Besides this, there were other problems which the Conference had to tackle. The question of setting up a Board of Secondary Education in Bengal, which will relieve the Calcutta University of an unduly heavy burden, and thus allow it to concentrate its attention more on the academic rather than the secretariat aspect of university work, was also discussed at length. The problem of expanding the scope of primary education, particularly in rural areas, was taken up. While associating ourselves wholeheartedly with the opinion of the Conference on these matters, we cannot, however, support its plea for "deprovincialisation" of

Government Colleges. We strongly protest against such a step, which will be a very severe blow to higher education in Bengal. The Government Colleges have all along been regarded as the models for private institutions to copy, and however much others may condemn their existence, it can never be gainsaid that they stand for discipline and order, which our students need so much in these days. Moreover, from the point of view of sentiment, the Government Colleges are entitled to get a sympathetic hearing; most of them can claim to be the pioneer educational institutions in the different localities where they are situated. To demolish these hoary edifices hallowed with past memories will be a work of ruthless vandalism. In this connexion we cannot help mentioning the interesting suggestion of one member to keep Presidency College away from the clutches of deprovincialisation. To quote the gentleman, who incidentally happens to be the founder-editor of this Magazine-" Let not the individuality of that institution be merged into a greater body." We, however, not only endorse this view most heartily but hope that the same attitude should be taken up with regard to our sister colleges in the mofussils. The Government should never abdicate its own functions, and our educationists, too, in passing judgment over these institutions, should fully bear in mind its far-reaching consequences on the future of education in the province.

This season is indeed an eventful one for the cricketers all over the country. The M. C. C. are on a visit here, and everyone is watching their movements with keen interest. Their fixture includes a series of Test matches which will raise India to "the dominion status in the cricketing commonwealth." We cordially welcome our guests and also hope that our players will not fail to give a good account of themselves in the coming matches.

From sports we come to politics. But politics in India is passing to-day through one of its periodical interludes when the national movement has given place to little dramas here and there. It is very difficult to predict whether this stagnation is a sign of return to normal life, or, as is claimed by others, simply a lull before a fresh outbreak of the storm that is brewing. Mahatma Gandhi, who may very well be called the political barometer of India, has taken a long leave from active politics, while his young followers have not yet been
able to decide for themselves as to their future line of action. The movement which started with so much promise and enthusiasm is now allowed to drift hither and thither like a rudderless ship. The suspense continues as before without perhaps the slightest hope of a glorious sunshine in near future.

Meanwhile, Mahatma Gandhi has staked his everything on a new cause, a cause which, if fulfilled, will be a unique achievement in the nation's history. The Harijan Movement deserves the unstinted sympathy of every true Indian and, in the name of humanity, everyone of us should have the boldness to work for it. The vice of untouch. ability must be eradicated root and branch from Indian soil. To allow it to continue is a standing condemnation of Indian society in the eyes of the world. But it is doubtful if ever the Mahatma will succeed in this, his supreme effort. Orthodoxy still continues to dominate the imagination of the Hindu mind which is fettered with the rigid ideas of caste-distinctions. The nation which can tolerate such medieval anachronisms even to-day is doomed to eternal bondage. We must keep pace with the times and amend our ideas and institutions according to current opinions and thoughts. But in India, we boast of the supposed unalterable codes of our society and instead of revising them in the light of modern culture, we guard them day and night against any change. There are Brahmins, for example, who still live in a fool's paradise shut out from the influence of all liberal ideas. To our shame and ignominy, many of our much-vaunted leaders of society have been suddenly roused with a crusading zeal against the movement initiated by the Mahatma. It seems that no amount of persuasion will move these die-hards, who obstinately cling to their ridiculously crude ideas. What India needs to-day is the coming of a Hitler, against whose iron hand not a straw will dare move. We are dreaming of political upheaval and economic emancipation but to-day a social revolution must precede everything else. Our salvation lies in our courage to fight out this canker in society, which is eating into the vitals of the nation. Ecrasez l'infâme

Turning to the world abroad, we are overwhelmed with a formidable array of momentous events. Hardly had Iraq recovered from the loss of Feisal, that Cromwell of the Middle East, when the tragic death of Nadir Shah plunged Afghanistan in mourning. His assassination, it was apprehended in all quarters, would be the signal for another era of political turmoil and disruption in Afghanistan; but fortunately for her as well as for her neighbours, the promptness with which the
young king, Zahir Shah, was placed on the throne, hushed all possibilities of an outbreak. Nadir Shah came to the throne amidst a chaotic situation, but in the few years of his reign he changed the face of his country, being himself possessed of the very qualities which are demanded of an able ruler-patience and tact. The far-reaching changes introduced by his idealist predecessor would have been totally nipped in the bud had he not been successful in co-ordinating the movement of reform with the strongly sensitive mentality of the rough Afghan people.

The situation in Europe for the last few months presents a gloomy outlook. After completing his domestic terror by which he succeeded in making Germany hundred per cent Nazi, Hitler would not hesitate to defy the rest of Europe. The dramatic withdrawal of Germany from the Disarmament Conference and the League of Nations has simply upset all European calculations. It was no doubt a set-back to the progress that the Disarmament Conference had made so far, and other Powers may have reasons to blame Germany for that. But a little consideration of the whole situation will reveal to us the fact that the German action was not entirely the result of the sudden whim of an irresponsible demagogue. If, as is now openly admitted, the war-guilt does not belong to any one nation in particular, then certainly every nation is entitled at least to a rough equality of status. To deny that right to Germany alone cannot be regarded as an example of international justice. She has a right to be heard by other Powers, and she cannot obviously afford to remain helpless without arms, when her neighbours are so busy in re-arming themselves. Moreover, was the prospect of world-peace more promising when the German attitude was otherwise? Even on that point, a definite answer is not possible. For, Pacts and Draft Conventions were nothing better than temporary patchworks. The attitude of European statesmen at present is only to play for time in the pious hope of something unexpected suddenly turning up. In spite of all their eagerness to prevent the Armageddon, the nations of Europe cannot yet feel the urgency of their voluntarily discarding all weapons of war. Everyone expects the others to disarm first, with the result that world-peace remains only a tantalising vision of a far-off Utopia. It would therefore be a mistake to infer that the unbending attitude of the German "lout" is the greatest impediment to disarmament. He has only exposed too plainly what the finger of destiny would have pointed out in the near future, the tragic futility of the Disarmament Conference.

The year is drawing to a close, and with a mingled feeling we part with it. Time's inevitable march is beyond our powers to control. We only pause and look back to see what the past twelve months have meant for us. To some perhaps they brought boundless succeas satisfying their remotest wants. But to others, the year has come and gone only to shatter their unrealised vision of prosperity and happiness. Life has no charm for them, nor would they allow the beauties of this wide world to lure them any more into dreams of airy castles. But the tragedy of the past should only serve to strengthen them in their ceaseless struggle and in ringing out the old, they should ring in the new with renewed hopes. For they should always bear in mind that if life ceases to be a promise it does not cease to be a task. It is the highest dignity of a man's life to stand up against all the winds that blow. With this consciousness let us live in the present and face the future.

# Prices and Prosperity 

Professor U. N. Ghosal, b.sc. (Econ.), London.

THERE is a widespread belief that the way back to prosperity lies essentially in an endeavour to effect a substantial rise in the present level of prices, preferably to that of 1928,-the year immediately preceding the Depression. The arguments in support of this demand are commonly stated in a very simple and attractive manner. It is pointed out that the catastrophic decline of prices since the middle of 1929, has thrown the economic mechanism out of gear.; for, the motive force of its activity springs from the profit element which apparently has been destroyed, represented as it is by a margin. between costs and prices. Mere commonsense would thus suggest the restoration of this margin to a reasonable advantage by adjusting prices to costs-and not by costs to prices-while providing at the same stroke the necessary stimulus for an automatic functioning of the economic machinery.

There is, in these arguments, a clear presumption in favour of the view that the present crisis is chiefly a consequence of a devastating process of deflation which demands, as its necessary anti-dote, an equal dose of inflation. Small wonder, therefore, that the business community, almost in every country, have been clamouring so vigorously to force prices up by any means conceivable,-be that reflation, inflation or exchange depreciation. We are almost led to believe that there is, after all, a short-cut to prosperity. How far, then, is the world's disease amenable to such treatment?

## The Deficiencies of Monetary Theory.

The businessman has too often found support in the preachings of the economist. Consider, for instance, the diagnosis of Professor Cassel of our present illness. "The payment of war-debts (which includes reparations)," he says, "in conjunction with the unwillingness to receive payment in the normal form of goods led to unreasonable demands on the world's monetary gold stocks ; and the claimants failed to use in a proper way the gold they had accumulated. This statement may serve as a conclusion of our examination of the essential causes of the extraordinary fall in commodity prices since the middle
of 1929,"* which, apparently, is held to be the root cause of the present trouble. Do these remarks bear the test of examination?

It is common ground that the burden of war-debts and reparations has never been more than a fifth of world's total indebtedness. When America, in 1928-29, had virtually ceased lending abroad the difficulties of the debtor countries were due primarily to the absence of foreign funds, on the strength of which they had built their newly found prosperity, than to their fulfilling the debt obligations. Consider for a moment the volume of post-war borrowings. To put it in round figures, Germany alone had borrowed, within 1924-29, more than $\$ 4,000$ million, half of which, it is significant, were arranged within the years $1927-28$,-the period immediately preceding the depression. The figures for South America and Australia were about $\$ 1,600$ million and $\$ 1,300$ million respectively. No wonder that the stoppage of American lending had first produced the crisis in Australia and South America,-countries which had nothing to do with war-debts and reparations.

It is true that France had, during the years 1927-28, increased her gold reserves substantially, but most of these bore no relationship with war-debts and reparations ; for, the French gold withdrawals were composed partly of profits from speculation in currency and partly of the flight of capital during the previous period of currency instability and partly of the export bonuses of a depreciated currency. On the other hand, a considerable sum had been attracted to the U. S. A. by the Wall Street boom of 1928-29, with no mean significance to the gold reserves of the investing countries. While we must not minimise the political bitterness and economic instability which war-debts and reparations have caused, it is hardly worthwhile exaggerating their influence on the world distribution of gold.

Next as to the alleged relationship between gold distribution and the fall of prices. The maldistribution of gold was no new phenomenon in the post-war economy. It is significant that during the years of greatest economic progress, 1927-28, gold distribution has been in some respects worse, or at least no better, than at the end of 1929 when the crisis had already set in. Thus, for instance, at the end of 1929, Germany had a higher gold reserve than in 1927, while the share of the rest of the world had remained throughout the period under consideration pretty constant. France had no doubt increased her reserves substantially by 1929, but they were actually $3.3 \%$ lower than in r913, while her gain was balanced by the loss of practically a similar amount

[^5]by the U. S. A. It can thus be safely inferred that the seeming alterations in the gold position offered little opportunity for a drop of prices. How can we, in these circumstances, accept Professor Cassel's proposition that a drastic recourse to deflationary methods, necessitated by an one-sided flow of gold, had pulled down prices and dragged in the depression? It is not merely the gold position which speaks to the contrary, but also actual statistics which reveal that the wholesale price-decline, during the first eight months of the crisis, was no greater on the average than about 10 per cent. It certainly sounds curious that so slight a fall should have by itself generated a crisis which has been powerful enough to shake the very foundations of the world economic structure. The fact is that the present drop in prices is largely a result of the depression itself, which must have been brought about by such other factors which invariably escape the attention of those who are too eager to interpret all economic evils in terms of money.
A. Dominating Tendency of the Productive Organisation.

Every attempt to trace the origin of the depression to a single germ must ultimately prove unsatisfactory, as it appears very likely to be an outcome of a curious combination of multitudinous factors. It is nevertheless possible to distinguish one or two dominating tendencies from the more subordinate ones, particularly to bring into clear relief the role which a reflationary method could fulfil as a remedial agency. $\downarrow$

In our economic mechanism profits, we are aware, occupy a pivotal position. If the margin which it represents between costs and prices be wide or elastic, price fluctuations of smaller dimensions cannot affect productive activity ; if, on the other hand, it is too narrow or inelastic, a small drop in prices may be sufficient to throw the whole mechanism out of order. From the nature of the present collapse, it is broadly inferrable that it was the latter situation which the post-war economy had increasingly to confront, though, it had for a time, maintained its balance fairly well owing to mass production and nationalisation, and thanks to the steady level of prices, over a large area, till the middle of 1929. Once the equilibrium had been endangered, sales and prices reacted cumulatively on each other till they were depressed to desperate levels.

Wherein lies the responsibility for this increasing margin of cost disadvantage? On the last analysis it must be found, not in the rigidity of the price structure, as some writers have endeavoured to show, but in the tendency of the Productive Process to a tremendous
concentration over a fairly narrow range of industries, such as, iron and steel, ship-biulding, coal, chemicals and textiles. It is difficult to accept the rigidity of the price-structure as the root cause of the depression because, with the notable exception of Great Britain, it had nowhere manifested itself as a general phenomenon. It has, in fact, appeared more as an aggravating factor of the depression than its original cause. Further, even if the price structure were fully elasic, it could not have been indefinitely lowered while the productive organisation had been busy turning out articles of identical nature. A constant cost reduction, to face competition, is, after all, an impossible adventure.

The outstanding proof of this one-sided expansion is easily provided by the existence of tariffs which become inevitable when most producers cater for similar goods. The collapse of the post-war reconstruction boom has often been explained by most critics either in terms of undut credit expansion or in the creditor's refusal to accept payment of interest and other charges in the usual manner of goods and services. None of these seems to reach the ultimate cause. The expansion of credit, in ordinary circumstances, cannot create an economic disaster so long as there are proper avenues for repayment. Why was it that the creditor asked his dues back in gold? Evidently because the productive scheme of the parties almost resembled one another which made the tariff barriers inevitable. Add to these the influence of a phenomenal increase in the world's productive power which in 1925 was about 18 per cent. greater than in 1913, while in 1929, it had almost doubled itself as compared with 1925. Small wonder that this changed has proved to be a curse instead of a blessing.

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X_{\text {Theoretical Potentialities of Reflation. }}
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On such a background as this, the essential problem which awaits solution consists, not so much in the revival of production and profits along pre-crisis lines, as in an endeavour at rectifying the misdirection of resources and enterprise between different countries and industries, and in creating, as far as practicable, a varied type of demand. Are these aims realisable by a requisite rise in the present level of prices? The answer, at any rate from a theoretical point of view, lies mostly in the affirmative, provided (i) a suitable technique of reflation can be developed, and (ii) the conditions necessary for its success are given substance by its adherents.

It is well to remember that the most effective method to raise prices is not the one which is easiest to adopt. For, what is needed
is not an isolated, but a general, solution acceptable to most countries for securing a permanent and mutual benefit. We must, on this ground, reject such devices as exchange depreciation or a host of other " short-cuts" which, in the long run, almost always end in disaster.

The problem requires an attack from two directions. On the one hand, the volume of world currency has immediately to be increased while, on the other, some methods have to be devised for putting the additional, as well as the present, currency into quick circulation. The easiest way of doing the former would be by a simultaneous devaluation of world currencies in terms of gold as well as by a joint reduction of legal minimum ratios. The amount of gold released by this process would be quite abundant to build reserves for additional money, particularly if the U. S. A., France and the U. K. were to keep a part of these with the Bank for International Settlements which could thus lend substantial help to debtor countries. These measures would introduce little novelty to the present monetary practices as neither devaluation nor reduction of minimum ratios is a new matter in currency history, while nations have already been used to keeping deposits with the B. I. S.; and the extension of these habits would in effect, seem more simple and practicable than the issue, for instance, of international gold notes, as was suggested by Mr. Keynes, to the participating countries against their bonds of an uncertain character.

If in these ways the volume of world currency could be increased the problem of putting it into active circulation could best be met by a policy of organised expenditure on public works,- a method whose potentialities have been recognised by almost all types of opinion. Evidently, during a period of depression when most concerns run at a loss, there are few producers or businessmen who venture either to extend production or take fresh risks, and even if some succeed, the total effect on the level of prices and profits is negligible. Hence the demand for organised expenditure by public authorities just, as it were, to set the ball rolling.

The success of the above measures to solve the ultimate problem, of correspondence between mental and material resources (as distinguished from a temporary stimulus to industry)-to check, that is to say, the present tendency of industrial concentration-would depend, it is now important to grasp, on the acceptance of a solitary condition, viz., the free play of prices. The readjustment of production by eliminating the inefficient as well as by stimulating the resourceful can be effected by the price-system only if there are no restrictions to its freedom of movement. This implies, in other words, the removal of all economic rigidities which have been responsible, in recent times, in
reducing, on the one hand, the elasticity of the productive organisation, and on the other, the volume of international trade, and include, in particular, wages, tariffs and exchange control. It is futile to expect that a given rise in the price level would work wonders while all the forces which destroy its effectiveness show little sign of abatement.

The Way the World is Moving.
And, in fact, the world we live in is neither prepared nor suited to maintain such conditions as would allow the economic organisation to be guided by the free play of the price system. That is why unrestricted capitalism, with its watchwords of business efficiency and laissez faire, is rapidly giving way to deliberate control and planning.

The problem is too vast for present treatment. If a broad generalisation can be made, it needs to be approached from two directions: (i) limitation of output of overdeveloped industries, and *(ii) organised direction of future expansion. True, the world has hitherto given very little evidence of its capacity for co-operation on matters of common interest; there are, nevertheless, certain achievements to its credit. Witness, for instance, the recent agreement reached on the limitation of world-supply of wheat and silver. There is no reason why a success of a similar nature will not be achieved, in the near future, in other branches of production.

The problem of future expansion is certainly more difficult of realisation. It calls for foresight, research, direction and readjustment. The task, obviously, has to be entrusted to experts, organised as a permanent body, whose powers and ideals should differ in essential respects from the unbusinesslike economic councils of post-war world. And if such organisations can meet one another on an international plane, as they naturally should, the conception of a co-herent policy of general development would largely be assured.

# Taxation by Local Bodies in Bengal 

Sushil Kumar Dey, i.c.s.,-Ex-student.

PROBLEMS of local government and finance deserve greater attention from our students than they have received up till now. Most of the public men at present concerned in the administration of our local bodies are without any special training in economic and political science. It is of very great importance that scientific research should investigate the phenomena these men are called upon to deal with and facilitate their understanding and solution. A progressive local self-government requires that practical studies by trained sociologists should be placed at the disposal of the lay men who run this government. In every country a continuous stream of such knowledge is poured forth from its academic men, but in Bengal, at least, there appears to be scanty recognition of this need and still less attempt to satisfy it.

The present article intends to indicate some aspects of the problem of local taxation in our province. It is to be hoped that some one with ampler time and resources at his command will be interested enough to undertake a complete investigation of the subject. Its significance may be easily appreciated. The power of taxation constitutes, in the last analysis, the power of social control over expenditure. It determines what part of the national dividend is to be spent by the public organs of the state and, consequently, what is to be left to individual citizens to spend for themselves. It is, therefore, an important determinant of the nature of national consumption, and, through consumption, of national production. Its influence on the distribution of wealth are profound and extensive. These facts are text-book commonplaces and require no elaboration. What must be emphasised is that the logic of national taxation is applicable to the phenomena of local rates also. Within a restricted geographical area these exhibit the same characteristics. Our Municipalities and Union Boards determine the disposal of the income earned within their respective jurisdictions, and the manner of this disposal has direct and indirect bearings on the relative economic positions of their residents and their earning capacities. The financial operations of these bodies are every moment giving rise to important economic reactions within their particular spheres. It is
necessary to so direct these operations that only those reactions are set up which tend to maximise the economic welfare of the units.

There are four distinct varieties of local bodies functioning in Bengal. Urban centres have their Municipalities, while rural areas are served by the District, Local and Union Boards. Of these the District and Local Boards have no independent and direct taxing power. The principal source of their income is an impost on land levied and collected through the agency of the Government. Municipal revenue is derived chiefly from taxes and fees, the distinction between these two charges being practically indeterminable and insignificant. The two most important taxes imposed by municipalities up till last year were the taxes on the annual value of holdings and that on the income of their residents, commonly referred to as the personal tax ; but both these taxes could not be imposed simultaneously within the same ward of a municipality. As many as 6 r out of our II7 municipalities levied the personal tax in the whole or parts of their areas until the Bengal Municipal Act of 1932 abolished it. Only a tax on the annual value of holdings is now retained, but at the same time the Act authorises municipalities to impose a new tax on certain scheduled trades, professions and callings within prescribed maximum rates. It should be realised that municipalities and union boards are the only two classes of local bodies which have been vested with the power of levy: ing taxes. Union Boards are rural bodies constituted by the Bengal Village Self-Government Act of 1919 and are developments out of choukidary panchayets which exercised jurisdiction over groups of villages for the purpose of maintaining the village police. Besides this function these Boards have now been given wide powers for the administration of education, sanitation, water-supply and transport within the villages under their charge. The union rate imposed by them to carry out these purposes is a single tax on all residents within their areas corresponding closely to the old personal tax in municipalities.

The extreme lightness of the tax burden is the most important feature to note about our local finance, whether municipal or rural. No figures of the incidence of taxation worked out per head of population can possibly bring this point home. It is the incidence on income which is significant. In other words, what is important to ascertain for our purpose is the proportion of the total earnings within an area which is taxed away by its local authority. Precise data are not available on this point, but there is ample evidence at hand to warrant certain approximate conclusions. In most of the municipalities in which the personal tax was in force, only one per cent.
of the income was taxed. In several the assessment was less than this, the municipality of Cox's Bazar in Chittagong district returning the lowest rate of half per cent. The other taxes commonly levied in these municipalities are the water and the latrine or conservancy rates, assessed at io to 15 per cent. of the annual value of holdings. These taxes are also to be taken into account to arrive at a measure of the total incidence, and in order to express them as a percentage of the ratepaying income, it is convenient to regard them as charges on a particular kind of consumption, namely, that of housing accommodation. It is well-known, moreover, that expenditure on this service bears a steady relation to average income, and following the practice in other fields, this may be assumed to represent roughly to per cent. of the latter. Thus the water and conservancy rates may be presumed to impose a burden of another one per cent. on the earnings within the taxed locality. In municipalities which imposed a rate on holdings in preference to a tax on persons or individual incomes, the tax burden was still lighter. The holdings rate is generally $7 \frac{7}{2}$ per cent. of annual value or rental and, calculated on the above assumptions, this yields an incidence of only $\frac{3}{4}$ per cent. on income under this head. It may be concluded, therefore, that municipal authorities in Bengal appropriate a little more than one-fifth of the total income accruing within their areas for financing their operations. The burden of union rates is, of course, even less. Figures are not available and, even if they were, little reliance could be placed on them, as assessment is not systematic and its basis is almost always conjectural." In the writer's personal experience in a few places in the west of Bengal the tax has been seldom found to exceed $\frac{3}{4}$ per cent. per annum of income. But the incomes of the assessees given in the Union Board lists are generally underestimated, and the true incidence may therefore be presumed to be lower still.

Light taxes or rates may be argued to be the inevitable expressions of the low earning power of a people. The proceeds of taxation, that is to say, in some of our local areas, would, in all probability, compare unfavourably with the revenue raised in some of the wealthy industrial areas of a progressive country even though a very high proportion of the income within such of our local areas were to be taxed away. This is perfectly true, but does in no way affect the contention underlying the preceding paragraphs, which is that the present limited usefulness of our local bodies is directly due to their appropriating for their purposes only an exceedingly small proportion of the income of the residents within their areas. The poverty of the masses in this country may indeed decree that the incidence of taxation as measured per
head of population would be necessarily low, but does not in itself fix the ratio in which the national or local dividend is to be distributed between public bodies and private individuals. The distinction in the two approaches to the question might be clearly brought out by representing the situation in another light. There is no village at present which is in a position to afford electricity, house to house supply of filtered water, underground drainage and asphalted by-lanes, because even if the entire income of all the villagers put together were devoted to these purposes it would not suffice to provide them; but it is possible for each one of our rural and municipal self-governing units to improve its water and lighting supply, conservancy and transport services to a possibly undreamt of extent by ordering a different disposal of the total earnings within its area. The first is a question of increasing this total, a problem of the widest and most general nature in economics ; the second assumes this total to be fixed and seeks to discover that particular application of it which conduces to maximum economic welfare. It is the central problem of public finance.

The problem is identical with that faced by every individual who has a particular sum of money to dispose of in two or several alternative ways of expenditure. He balances in his mind the satisfaction he expects to derive from each and seeks to distribute his fund in such a manner that the return to him from the last unit of his outlay in any one line is equal to that in any other. So long as there is any discrepancy it is worth his while to turn from the mode of expenditure yielding a lower return to that yielding a higher. The same considerations hold good in the field of capital investment also. The distribution of capital in any country among its several industries will always tend to be such that the profits and dividends, after allowing for all compensating factors, are equal in every field. Any other mode of distribution would indicate that the capital resources are failing to be used to a country's greatest advantage. If jute shares yield higher profits than, say, tea shares, it would signify a relative congestion of capital in the tea industry and would set up a flow of funds back to jute. Similarly, a householder who makes a rash purchase of a motorcar will find that his satisfaction from its use is poor compared to what he would have derived from greater outlay on the education of his children. All these familiar experiences illustrate the principle of equi-marginal returns, which is fundamental in determining the ideal utilization of any given fund or economic power or resources. When a limited quantity of such resources meets a multitude of competing demands, the satisfaction of each of these should proceed up to such a point that the marginal returns or satisfactions on all of them are equal.

The object of a taxing authority is thus to secure an equality between the marginal utilities of public and private expenditure. The expenditure undertaken by a public authority should be of just such a magnitude that this equality is attained; and just so much of the total wealth produced within an area has to be taxed away as is necessary to meet this expenditure. This gives the ideal or optimum amount of taxation which must be raised to secure the greatest economic well-being of the area. If taxation is less, the marginal satisfaction from works of public bodies exceeds the marginal satisfaction from objects of individual expenditure and the sum total of satisfactions becomes less than the maximum. Similarly, if taxes exceed the optimum, the marginal satisfaction from public works falls short of that from private objects of expenditure and the total of economic welfare is again less than the maximum.

The one drawback in this simple theory is the difficulty of applying it in practice. The exact determination or measurement of the optimum in any fiscal system is rendered almost impossible for several reasons. For one thing, it is hard to discover a common unit of measurement for a multitude of different kinds of utilities so as to bring them into commensurable relations with one another. Absolute equalisation of marginal satisfactions is, again, frustrated by the impracticability of experimenting with infinitesimal instalments of purchasing power against infinitesimal accretions of utilities. It cannot be gainsaid, however, that the concept of optimum taxability embodies a perfectly intelligible fact of psychological experience. It is of considerable importance to formulate the idea and to grasp its implications in order to define the ends of financial policy and clarify its issues. Moreover, for practical purposes, it is of greater interest to understand the nature of the causes which determine the size of the optimum in a particular case than to undertake an exact measurement of it.

The optimum amount of taxation would be high or low according to the degree of usefulness of the works undertaken by a public body. A community which can afford to pay for a good drainage system may not be able to bear the expenses of pompous public entertainments. In a municipality which has three public libraries but no public park, the optimum may be higher in case of a proposal to open a park than in case of one to add another library. The optimum is similarly relative to the character of expenditures undertaken by the members of the community in their individual capacities, and moves in inverse relation to the intensity of demand for the objects of such expenditure. Where the objects of private expenditure are generally of a useful character and yield a high return the optimum taxability would be
found to be lower than at a place where the situation is different. The amount of tax a community finds it worth paying also depends on the efficiency and honesty of the spending authority. The return to the public of tax revenue wasted in unpractical schemes or embezzled by its servants is necessarily nothing, and optimum taxability would be nil in an area where all the services provided by the public authority can be demonstrably better and more economically organised under private enterprise.

There is one important point to note at this stage. The particulars of the taxes which ought to be imposed in a given area follow as corollaries from the definition of optimum taxability. All taxes in the view taken here fall on different forms of consumption, actual as well as potential, defining consumption in a wide sense so as to include investment, which is the consumption of capital goods. The task of revenue raising is the task of taking off slices from those supplies of which the marginal social utilities are relatively poor. The task of revenue spending is the task of creating and adding to those supplies for which social demand, actual or potential, is relatively keen and the marginal social utilities comparatively high. The sum total of the financial operations in a perfect case would bring the marginal satisfaction of every variety of economic supply in the community to the same level. In real experience the tax-raising and tax-spending operations may have to be modified by considerations of expediency and convenience.

This process of reasoning points the way of progression and leads to identical results. The taxation of staple articles of human consumption is unsuitable because their urgency to the community is vital and the transfer of purchasing power from these to any other supply would cause a steeper rise in their marginal worth than could be compensated for by the fall in the marginal satisfaction from increased outlay on the latter. It is the consumption of less urgent forms of utility which offer the happiest field for taxation, and increasing rates of tax incidence on higher grades of income may be legitimately presumed to secure this end.

It ought to be now clear that the optimum taxability of any fiscal unit is not simply a question of raising an ascertained amount of revenue anyhow. It is a function of progression, of selecting supplies for taxation for which society has a relatively elastic demand. In our municipalities and unions the commissioners and members of the boards assembled at their budget meetings have first to estimate the relative importance of different economic goods to their particular communities. Having determined this, it is for them to undertake a
redistribution of the available wealth in their areas among the different economic needs so as to equalise the marginal satisfactions in all the cases; on the one hand, by taxing the appropriate objects of individual expenditure ; on the other, by initiating public utility undertakings and subsidizing enterprises on which voluntary outlay has been uneconomically small.

The contention that the taxation imposed by our local bodies errs on the side of defect may now be explained. It does not imply a criticism that the application of economic resources to the operations of these bodies, e.g., provision of water supply, lighting, drainage, roads, medical relief and education, has not been carried up to the extent which is ideally desirable. Such a criticism would be both worthless and unreasonable. It is, however, perfectly legitimate to point out that the serious maldistribution of purchasing power which may be noticed in our countryside could be rectified by our local authorities by a proper use of their financial powers. It is a universal experience in this province to encounter, side by side with essential public services paralysed for lack of funds, relatively extravagant types of expenditure of which the marginal satisfaction to society must be incomparably lower. Palaces raised in a town of foul drains, high class automobiles maintained on muddy and bumpy roads and flourishing cinema houses in a municipality too poor to equip the requisite number of Primary Schools are manifest examples of injudicious distribution of the economic resources of a locality by its public authority. Increase of taxation would not, indeed, necessarily guarantee improvement in the usefulness of public works. There are other factors to be considered which have been already analysed. It is fortunately true of many of our municipalities and union boards that there is no lack of good schemes before them nor any conspicuous deficiency in administrative capacity, honesty or idealism. The principal obstacle to progress is what is termed their timidity in the language of the latest Government resolution on municipalities, which may be taken to mean the absence of a bold policy of assessment and collection.

The most convenient method of transferring purchasing power from enterprises which yield a low marginal return to society is the imposition of a steeply progressive income tax. Income tax is resolvable into taxation of a variety of consumptions. The larger an income the greater is the proportion of expenditure out of that income on luxury objects and hence the greater the proportion of that income which ought to be taxed away to finance public utility undertakings. It may be noted that with the sole exception of Suri in Birbhum district, in none of our other municipalities which imposed a personal
or income tax under the old Act was that tax of a progressive character. Even in Suri the progression was half-hearted and inadequate. In the case of union boards the rates are generally proportional, and in some cases have been found to be definitely regressive in their incidence. So long as a tax.system retains these characteristics any attempt to increase its burden would be necessarily resisted, since every increase on the lower grades of income would operate in effect to enhance the disparity in marginal satisfactions. An individual who is too poor to afford adequate supplies of primary necessities cannot be required to contribute towards a road improvement.

The union rate, which is a general income tax, is ideally suited to progressive treatment. Incomes may be ranged in their ascending order into a convenient number of groups and increasing rates of taxation may be fixed for these, subject to the maximum limit of Rs. 84/- laid down by law. The imperial income tax could funnish a model. Progression is also applicable to the trades and professions tax permitted to the municipalities by the new Act, within the particular tax groupings fixed under Schedule IV of that Act, although agricultural incomes are an important class which would completely escape its scope. The tax on holdings is not a tax on a single object of consumption. The holdings of high value satisfy not merely the primary need for accommodation but cater to a large extent to the instincts of art and vanity. There is for this reason a clear case for the taxation of the holdings of higher valuation at higher rates. There is a corresponding argument for an exemption limit for holdings valued under an agreed figure. Tolls on roads and ferries are charges on necessary forms of expenditure and have a regressive effect in consequence. It should not be difficult to replace them by a progressive holdings rate.

The expenditure undertaken by local bodies on works of public utility out of the amount raised by taxation has effects of a profound nature on the productive capacity of their areas. The present article, however, does not propose to discuss these reactions. It wculd be enough to indicate that improvements in transport, sanitation and education directly conduce to improvements in commerce, industry and the earning powers of individuals. The payment of taxes is in this view a species of investment. Most of the reluctance to tax-paying would disappear if this fact were properly appreciated, and our local bodies could help this understanding by practically demonstrating the high returns accruing to the community from their public undertakings.


KAMINI ROY
(By courtesy of Mr. K.N. Chatterjee)

## MY MOTHERLAND !*

Khagendranath Das Gupta, m.a.,-Ex-student.
The day I gave my life away as an offering at thy feet, I put an end to both laughter and tears.
I got no time to laugh, no time to weep any more;
O my miserable motherland! my mother! my mother!
I want to keep the fire burning in my heart, I want to engage myself and others in thy work;
Life's little joys and little sorrows-they are immaterial When the call comes to work for thee, my mother! my mother!

If the present is lost in the memory of the past, I will not talk about that, but conceal it in my bosom;
If I sing any song, I will sing unceasingly;
I will die for thee, my mother! my mother !
I will die in thy work, I will live for thee, Or else this sad life will not be worth the living. So long as the load of thy miseries is not removed, Living or dying, I will work for thee, my mother! my mother !

[^6]
## A Dream in Marble*

Nabagopal Das, I.c.s.,-Ex-student.

PROVASH used to carve statues and statuettes out of marble.
He had turned to sculpture after quitting school. He had even attended classes at college for a few days, but soon he had discovered that the Miranda of his professor went over his head, and, instead, there appeared before his eyes the picture of the first flush of love of an innocent girl in a lonely isle. The picture of Miranda would burst forth before his eyes in the image of marble, and he would start wondering how he could best express her dreamy bewilderment . . . whether the style should be Greek or Pagan!

Neither his professor nor his fellow-students could keep pace with the train of his thought. The result was that one fine morning he sold out his books to an old, hoary hawker, and made straight for Lucknow to learn something in the School of Arts there.

After a year's training in Lucknow he came back to Calcutta.
For the first few months he started work with exuberant enthusiasm. He rented two small rooms, hung pictures and paintings all over the walls and applied himself in real earnest to the worship of the Goddess of Sculpture. Day and night he merged himself in this sadhana.

His friend, Probir, would come and say: " Look here, Provash, don't forget yourself so completely like this ; have an occasional peep at the world outside! "

Provash would reply without turning his gaze away from his marble: "Just a moment, my friend . . . the line here is baffling me!"

Probir would come closer and see that Provash was carefully applying his chisel to his statuette . . . It seemed as if he was wearing a melody into his own song.

The line would always baffle Provash. Hours would pass and yet Provash would have a feeling of discontent. Probir would get fed up and move away.

For six complete months Provash remained immersed in this dream. He came to his senses only when his broker Ramsaday Babu

[^7]shook his head doubtfully and said: "I am afraid these are not what they should be!"

Provash queried in astonishment: "And why?"
-" What you have been doing, Provash Babu, has not at all been popular. Who, for instance, would care to analyse this one scratch of yours here? . . . Men care for something which is agreeable on the whole, and your statuettes lack that vital quality!'"
-" But they embody my feelings, my dreams . . ."
-" My dear Provash Babu, why do you forget that the public have a mind different from yours? If you want to sell things, you must see that buyers like to buy them! . . . Your whimsies and fancies won't do! "

Provash realised that the mind of the artist and the whimsies of popular fashion never move together. He replied very curtly: " But I can't sacrifice my talent before the momentary fancies of the public! "
"Please don't ask me to be your broker then," said Ramsaday Babu, " you try to sell your statuettes yourself."

Provash did not reply at first. He just thought for a while and then said sharply: "Thanks ever so much for all the trouble you have taken so far . . . good-bye!'

Before taking leave of Provash, Ramsaday Babu added-with a tinge of sarcasm in his voice: " Please don't offer your thanks so soon-my services may be required again!"

At first Provash felt a bit depressed. Soon, however, he shook off his moodiness and started with his chisel again. His joy lay in giving form to melody: how could he live without that?

He was not upset by Ramsaday Babu's threats. If there was the gift of real truth and beauty in his art, thought he, he was bound to have success. Could the land which had presented the treasures of Ajanta to the world fail to appreciate the essence of artistic beauty?

He finished a few more statuettes of his own and put in an advertisement in the papers.

He had a number of replies. He felt elated. He spent nearly a whole week interviewing intending buyers.

But the results of these interviews completely shook his faith. Almost everyone made remarks similar to those of Ramsaday Babu and went away. Those who did not hesitate to say unpleasant things on his very face said: "With a little forethought you could have spared us this trouble and loss of time!" . . . And those who could
put on the mask of a polished speech smiled a bit and remarked: "Your art is really of a high order, Provash Babu, but the pity is that the masses lack the power to appreciate you!"

A few of these buyers tried to console him, saying, "Don't get dejected, Provash Babu. All artists have to go through this ordeal. They start their career unknown and uncared for, but when the time for recognition comes, appreciation comes with the speed of monsoon floods. And in their sweeping torrents every antecedent grief disappears."

The result of all these various remarks was, however, the same. When the sound of the footsteps of the intending buyers melted away Provash laughed a bitter laugh and threw his chisel on to the floor with a bang.

But a whimsical old gentleman took a great fancy for his statuette of Sujata and purchased it for ten rupees.

In the gathering darkness of the evening, Provash was thinking of his stars and smiling sadly to himself when Probir stepped into his room.

Probir worried a lot about his friend and wondered how he could help him. His own means were not such as to enable him to render any pecuniary assistance. Still, he felt happy and gratified if he could infuse into his friend's dejected moods a certain amount of hope and courage by means of a few words of affection and sympathy.

On seeing Provash lying listlessly in his room in the evening darkness, Probir asked: "Why are you lying like this at this hour of the day, my dear friend? "

These words of affection brought tears to Provash's eyes. He asked him to come closer.

Then, slowly, he narrated the happenings to Probir.
Probir was deeply moved and said: "This is the way of the world, Provash! . . . No one can appreciate pure gold. The glamour of tinsel seems so true and permanent from outside that before it even the purest gold pales into insignificance! . . . But that doesn't make gold any less pure!"

Provash replied with a sad smile: "I quite see that, my dear friend, but one can't also ignore hard facts. I had formerly imagined that I could ; but now I find that there are certain things which are primary and essential. If I lack competence, contentment and peace of mind how can I weave the fancies of my brains into lines of beauty?"

It was almost too true. What could Probir say in reply? . . . In the midst of the gripping silence he just pressed the hands of Provash in supreme affection.

In a very sad tone Provash added: " So I am thinking of turning a prostitute!"

A shudder ran through Probir's nerves. He said, "What in the earth are you saying, Provash? "

Provash replied with a smile: "You need not worry, Probir . . . What I mean is that so long I had been worshipping truth and beauty with the most perfect devotion. To-day I have to sacrifice that at the altar of popular whimsies! . . . In what way am I superior to a prostitute, then?"

Probir understood the mental agony through which Provash was passing. He heaved a sympathetic sigh.

Provash went on: "Of course, I am feeling terribly upset about it now. I can't even realise that I have to sacrifice everything at the door of worldly success . . . . In course of time perhaps I shall cease to feel upset!"

Probir pressed Provash's hands more affectionately still.
Provash went on in the same old strain: "I am not feeling so sorry at the thought of having to turn a prostitute . . . My greatest grief lies in the fact that when I shall once embark on this new path I shall lose all the sense of beauty in me. I shall then cease to feel ashamed of having turned a prostitute ; perhaps I shall feel elated over it! How shall I stoop so low, Probir?"

Minutes rolled into hours. The echoing notes of Provash's grief filled every space of the dark shadows inside the room. Probir said a few words of sympathy and took leave of Provash for the night.

And Provash lay there in a swoon, as it were.

The clock was registering minutes and hours. Provash was not in his own self now-his mind had left his body and gone far away.

Those few days at Lucknow! He had gone there to arrange offerings for his Goddess of Art! . . . And all the dreams, hopes and desires of his first youth had been circling round in his fancy like a beautiful melody.

It was then that he had met Sakuntala.
How strangely they had met! . . . A big company of young boys and girls had gone picnicking in a wood in the outskirts of Lucknow, and at their head had been Sakuntala of sweet seventeen.

And Provash had gone there, too . . . all by himself, of course.

Suddenly, monsoon clouds had gathered over the trees of the wood and the cold touch of rain had seemed to upset all the frolic and fun of the picnic. The company had gathered up their things and taken shelter under the spreading foliage of a big tree.

- By a strange coincidence of Providence, Provash also had taken shelter there under the same tree.

Sakuntala had been finding it difficult to stop the noise and bustle of her young folks. Provash had been feeling terribly amused at her failure to keep the flock in check.

Sakuntala could feel that a pair of eyes was following her. She was getting annoyed, but how could she stop the movement of somebody else's eyes?

Provash had been watching Sakuntala with the keenest attention . . . In her movements were the grace and liveliness of a fairy of the forests, her words beamed like lightning, and on her smile was the flash of a multi-coloured summer flower.

He had hesitated at first. Then he had come forward and asked: " These youngsters are worrying you a lot, aren't they? "

Sakuntala had felt irritated at this assumed superiority of his and replied: "Can't you see that for yourself?"

Very apologetically Provash had replied: "I was hesitating because you might think me too forward!"

And without waiting for any permission Provash had thrown himself into the crowd. At first the youngsters had felt a bit shy, but eventually they had found in his beaming smile and loud shoutings an echo of their own boisterous and lively spirit.

On the way back to town his conversations with Sakuntala had become much freer and easier. Provash had gathered from her that she was the only daughter of her father and that she had lost her mother in her childhood. He had felt a genuine sympathy for the girl.

After this incident he had often gone to visit Sakuntala. And he had found in her amiable father a man after his own heart. Moreover, he had soon discovered that Sakuntala was an artist, too: her genius lay in using the brush.

The minds of these two young artists had found a common melody. Provash had once remarked with a smile: "My chisel will have its sublimation when I shall be able to translate your image into marble!"

Sakuntala had answered with a smile: "But I shan't paint you with my brush-that would look ugly! Indeed, I shall paint your artistic genius, your steadfast sadhana!"

These meaningless talks came to an end when suddenly one day Sakuntala's father was transferred, under Government orders, from Lucknow. The castle that Provash had slowly built up in the air came down with a rude crash.

His secret longings had not been whispered; what he had wanted to say had not been said.

This evening after Probir's departure, Provash was playing with these dreamy fancies of the past.

He could not fully recollect the face of Sakuntala, but the vision of her words, her lightning smile was conjuring up some beautiful lines of a profile in his mind's eye.

It all seemed like a dream!
Provash was weaving dreams of his own, and all sorts of dreams! He fancied that Sakuntala had come near him . . that in the glistening shower of her smiles all his worries were gone . . . . It seemed as if she was a dancing fairy from Ajanta-full of colour, full of life . . .

A voice from afar seemed to reach Provash's ears: "Oh, my dearest one, why are you worrying? . . . Give concrete shape to my melody and your marble will sparkle with life! And then even sceptics will bow down to your genius!"

The clock struck twelve.
Provash got up from his dream and rubbed his eyes. He looked out of the window: traffic had stopped and only a faint streak of light from the street lamp was playing a game of hide-and-seek with the shrouded mystery within.

The melody of Sakuntala's voice was still dinning in Provash's ears. Was it a dream or just a heated fancy?

Whichever it was, Provash decided to obey the call of the melody.
He switched the light on and started with his work.
Probir came again the following morning. The tragic words from Provash's lips on the previous night had greatly agitated his mind, and so he had come along to Provash with the first approach of the dawn.

To his utter surprise he found Provash intently working on his marble with the electric light on, although the silvery rays of the morning were literally rushing through the window. Provash didn't even notice Probir's approach.

Probir asked: "Have you been going on like this all through the night? ${ }^{\prime \prime}$

Provash did not seem to hear . . . He was then intently trying to translate into marble the fairy look of Sakuntala's eyes.

Probir gave a slight shake to Provash on his shoulders and said: " You seem to be completely absorbed in your intoxication! Don't my words reach your ears?"

Provash then realised that Probir had come. With the chisel still in his hand he glanced outside and said with a blush: "Ah, it is morning now!"

Probir said in a tone of rebuke: "And you realise that, do you? . . . Well, if you go on like this, how can you keep up your health? "

With a strange smile Provash replied: " There is something higher than health, Probir: it is the artist's mind . . . . I am giving nourishment to my mind!"
-r But if your health fails how can you supply nourishment to your mind? "
-" My health shan't fail so soon, Probir. It has seen many a winter, my dear friend."

Probir saw that it was useless to argue. But how was he to stop this mad obstinacy of Provash? . . . It had to be stopped, anyhow!

He suggested a walk outside.
Provash replied briefly: " Not now, please."
Probir now became very angry. He said, "If you don't care for my advice at all, Provash, I shan't bother you any more with my company."

Provash stared at Probir with an appeal for sympathy and said: " If you, too, desert me, Probir, who will befriend me in my hours of sorrow and despair? "

Probir was very much touched by these words and said: "I don't want to desert you, Provash-it is you who seem to want to shun my company."

With another look of appeal in his eyes Provash said, " I shall get out for a walk as soon as I have finished the outline of this face . . . . Do come in the evening, I'll accompany you to a walk then.' ${ }^{\prime}$

When Probir came again to Provash's rooms before dusk, he saw that his friend was still sitting in front of his statue in marble and gazing at it with wonder and affection in his eyes. His hair was in a mess, but on his lips played a smile of happiness.

He said very quietly: " Oh, here you are! . . . I have finished the rough outline at long last!"

Probir asked: "Haven't you had your meals to-day?"
-_' Oh, yes! The cook brought them here . . . you can still see the plates there!"

Probir followed his eyes and saw that a few used plates were really lying in a corner on a table.

Provash asked: "How do you like this outline of mine, Probir?"
-" I can't understand much of your art, Provash; so, what value is there in my opinion? . . . But in my plain eyes the face looks very sweet!"
-" Do you know whose face it is?"
-" Whose, Provash? "
-" Of the girl of my dreams . . ."
Probir smiled and then said: "You'll spend all your years in dreams, is that so, Provash? . . . When did you see this girl in your dreams?"
-" Last night-for the last time. But this girl of mine has long existed in my imagination! It is her unseen fingers that are impelling me to translate her into a concrete shape!"

Probir went out for a walk in the park with Provash.
Provash was feeling very refreshed by breathing the free and bracing air of the open space after a long, long time. He was talking to Probir about anything and everything. Probir also was feeling happy at this changed mood of his friend.

Probir was saying: "Your sincere sadhana before your Art inclines me to believe that you'll achieve some brilliant success in no time."

Provash replied: " I don't care very much now . . . I just want to please myself."

In a joking tone Probir asked: "And do you do that by giving shape to the girl of your dreams?"
-"Yes, there is no harm, is there?"
-" Of course, there is none, but will your sadhana end with giving shape only? How will the girl of your dreams burst forth into life?"

Provash suddenly stopped in the midst of the walk . . . How was the girl of his dreams to burst forth into life?
-" Hallo, what's the matter?"
-" Nothing particular, Probir . . . Your words have put me in a fix! "
-"Why? And how?"
-" I have been giving shape to my dream, but I haven't cared to think how I can infuse life into the shape!"

Probir burst forth into a loud laughter and said: "Oh, is that all? . . . It shouldn't be very difficult in these days of autosuggestion!"
-" How? "
-" If you sincerely believe that there is life in your shape, you will see that your dream-lover will become a person of flesh and blood, beauty and colour . . . And then if you happen to have a living love in your rooms, she, too, I bet, will become jealous!"

Provash replied meditatively: "Oh no, Probir, it is not a matter of joke . . . There must be a lot of truth in what has casually come out of your lips!"

Probir now said: "Of course, there is! It was in our land that stony Ahalya had been brought back to life by the magic touch of somebody's feet! . . . But to achieve this one must have a supreme self-confidence and an earnest determination to infuse life into a mute thing . . . That is not possible for us common men!"

Provash did not make any reply. He was thinking, and thinking hard.

He returned home as soon as lights began to flash inside the street-lamps. Probir had tried to keep him in the park for sometime longer, but Provash would not agree.

Provash switched on the light in his room and stood staring at the outline he had woven after Sakuntala. Details were lacking still but the outline seemed to be smiling at Provash.

He muttered: "You think you won't come to me, Sakuntala! . . But I'll make you come! . . . I have found out the secret to-day-you will have to respond!"

He started on his work again with his tools by his side. What a patient application it was! . . . It seemed as if all the fire and desire of his imagination were trickling forth from the edge of his tools! He was moving round and round the figure and looking for any probable defects . . . Nothing seemed to satisfy him. He was constantly apprehending that the figure in marble had fallen far short of the figure of his dreams . . . . If the figure in marble failed to come up to his dreams, how could he infuse life into it?

Minutes rolled into hours and Provash was still working at his figure. He must finish it before day-break! And then he would
sit in an attitude of prayer and infuse the life of lightning into every inch of the marble!

It was past twelve. Provash's brains were reeling. How can a man go on like this-without food, without sleep?

Provash moved to the window in order to have a draught of fresh air. He heard a girl's soft peal of laughter from the roof of the house in front . . . Sakuntala would laugh, too, like this! Her laughs, her smiles would be sweeter still . . . They would raise a storm of happiness in his breast, and his whole being would dance in mad revelry!

Provash went back to his statue.
His eyes were straining, the blood-vessels on his forehead were jumping!

With a most unusual strength he was doing the last few details of the figure . . . . The eye-brows did not seem to be all right!Sakuntala's brows were lighter still! . . . "What has happened to me? " wondered Provash, " why am I making mistakes?"

Provash was giving the finishing touch to his marble in a dreamy ecstasy, as it were. The clock struck four . . . He must be ready for his prayer for life before the morning light streamed in! . . . Sakuntala is so demure and shy . . . she would blush at the nakedness of the morning light!

At about five Provash had finished his figure. He smiled a smile of supreme happiness.

He stood before it with a look of triumph in his eyes and said: " I have given concrete shape to my dream, Sakuntala . . . . And now my sadhana will have its climax if I can infuse life into you . . . . Would you still refuse to come to me, Sakuntala? "

Provash was reeling. Swinging and swaying, he affectionately caught hold of the marble face with the palm of his hands. It seemed to him that the music of life echoed and re-echoed through the universe . . that Sakuntala's face glowed with a living smile . . . that her lips quivered a little in appreciation of his sadhana!

Beyond this Provash could remember nothing. He found it difficult to keep on standing on his weak legs. With a suppressed cry he fell down at the foot of his statue ... .

The multi-coloured rays of the light of the sun were then just streaming through the bars of the window . . .

# Introduction to the Theory of Sphota 

Gourinath Bhattacharyya, m.a.-Research Scholar.

TTHE theory of Sphota is one of the most magnificent contributions of Sanskrit grammarians to the school of Indian thought. The problem-What is it that expresses import?-has been variously solved by the different schools of Indian Philosophy. But the theory of Sphota which the grammarians have propounded with a view to solving the aforesaid problem unmistakably proves their keen metaphysical insight. At the outset, they maintain that it is Sphota which is expressive of sense ; but, on a more intensive study of the problem, they discover that Sphota can be identified with Brahman. Thus from the empirical point of view they show that a sentence which is indivisible into parts (we mean words and letters) is endowed with the power of denotation (Cf. Vakyasphota). But they do not stop here. They have studied the problem in its metaphysical aspect and they affirm that the whole truth remains unrevealed if we concentrate solely on the empirical point of view. From the metaphysical standpoint, there is only one indivisible sentence which, by means of formal transformations, assumes diversity of forms (we mean, so many sertences) and expresses the so-called world of thoughts and this one indivisible sentence is Sphota (Cf. Akhandavakyasphota). In his monumental treatise on the philosophy of Sanskrit grammar-the Vakyapadiya, Bhartrihari points out that there is in reality one ill divisible sentence and the so-called sentences which, from the empirical standpoint, appear to be different from one another and are expresive of different senses are absolutely fictitious from the metaphysical point of view. ${ }^{1}$ An earthen jar and an earthen plate, for instance, are different from each other in respect of their forms only ; but, there is no material difference between the two-it is the same clay out of which either of them is made. Similarly, the one sentence undergoes formal transformations and we have so many sentences. Thus we observe that Sanskrit grammarians go so far as to prove that there is perfect identity between Sphota and Brahman. As Brahman manifests itself in and through the numberless objects of the universe, so

[^8]there is one Sphota which reveals itself through diverse forms of language and consequently through different senses too (Cf. Sabdarthayos tadatmyam-identity of word with sense). It has been maintained that there are two kinds of transformation-in the one, we have material change whereas in the other, there is only formal change. When milk changes into curd we have a case of material change ; but when a man mistakes a rope for a snake or a mother-o'-pearl for a piece of silver, we say that the rope or the mother-o'-pearl has undergone a formal change only; for, no sooner the man discovers his mistake than he ceases to take the rope for a snake or the mother-$o^{\prime}$-pearl for a piece of silver. Now when Brahman, it is said, undergoes a formal transformation, we have this world of ours. The existence of this world is not real-it is a dream which sinks into nothingness with the dawn of spiritual consciousness. The grammarians maintain that Sphota, which is otherwise called Sabdatattva, is in its nature identical with Brahman. Sphota undergoes a formal change and we have so many sentences and senses which should, after all, be looked upon as being different manifestations of that ' one indivisible Sphota.' It is certainly a positive mistake to think that there are in reality so many sentences and with them so many senses too. In more instances than one, the Vedas say that Sabda is one and that it assumes diverse forms. ${ }^{1}$ Hence it is why Bhattojidiksita in his Sabdakaustubha observes that by drawing a comparison between Sabda and Brahman, the grammarians have found out a priceless gem in their quest of an insignificant cowrie. ${ }^{2}$

We do not know when and by whom the doctrine of Sphota was first promulgated. There is no reference to it in the sutras of Panini nor in the vartikas (supplementary rules) of Katyayana. But we may observe that Panini, in one of his sutras on assimilation of letters (Sandhi,) ${ }^{3}$ quotes the opinion of a grammarian, a predecessor of his, named Sphotayana. Haradatta, in his well-known commentary on Kasika, has, however, commented on the name and he suggests that this learned scholar might have been, in all probability, an exponent of the doctrine of Sphota. ${ }^{4}$ This enables us to surmise that though

[^9]the theory appears to have been propounded long before Panini, its claims were not consistently pressed by its exponents ; and, as such, it did not find due recognition at the hands of Panini and Katyayana, It is Patanjali who, for the first time, appears to make a reference to the theory in his epoch-making work on Sanskrit grammar, the Mahabhasya. For therein Patanjali acknowledges in clear terms the distinction between the two kinds of Sabda-permanent (Nitya) and created (Karya) ${ }^{1}$; and it is with reference to the former that he usfes such epithets as "Dhruva" (fixed), "Kutastha" (unchangeable), etc.-epithets that are ascribed to Brahman with which Sphota has been identified. But Patanjali has not only hinted at Sphota by noticing the distinction referred to above, but he has actually used the term in his work and has also given us a definition of the same Thus, Patanjali observes a distinction between Sphota and Sound by asserting that Sound is only a quality of Sphota and that it serves to manifest the latter. ${ }^{2}$ And he defines Sphota as what is perceived by auditory organs, apprehended by intellect, manifested by sound and pertaining to ether. ${ }^{3}$

Patanjali opens his work by starting an enquiry into the nature of Sabda and he defines "Sabda" as one which is endowed with the power of expressing import. ${ }^{4}$ Suffice it to say for the present that, according to this definition, sentence or word is ordinarily supposed to be expressive of sense. But the question that arises in this connexion is, whether sentence or word taken as an indivisible unit is endowed with the power of expressing its import or whether the constituent members (i.e., the letters) severally or conjointly express the same. Kaiyata, the well-known author of the Pradipa-an explantory treatise on the Mahabhasya,-points out that letters are transient in character; they die out as soon as they are uttered. And when a number of letters, said to constitute a word or a sentence, cannot be simultaneously pronounced by one individual, an aggregate of letters is a logical absurdity. He further avers that letters cannot severally express the sense for the obvious reason that when any one letter in a word is competent to express the import, there is hardly any justification for the use of the rest. He, therefore, opines that, according to grammarians, a word as an indivisible unit is expressive

[^10]of import. ${ }^{1}$ And a word which cannot be viewed as an aggregate of letters but possesses an indivisible character is regarded as Padasphota in treatises on grammar. ${ }^{2}$ Kaiyata also speaks of Vakyasphota according to which a sentence indivisible into parts expresses the required sense. It is a matter of common knowledge that sentence is the unit of thought and expression. Language is the articulated expression of human thought. All thought is essentially a judgment. A judgment is concerned with two concepts which are grammatically known as subject and predicate. Now a sentence contains a subject and a predicate. So sentence is the fundamental form or unit of language. But it should not be concluded that a single or two words cannot express an idea. They do, e.g., Fire, Ink, Go, I say, etc. But these are really sentences in which either the subject or the predicate is understood and it is to be supplied from the circumstance. Thus "Fire" means "a fire has broken out"-here the predicate 'has broken out" is understood. "Ink" means "You bring ink"-here the subject "You" and part of the predicate "bring" is understood. " I say" means " I am astonished." Thus we see that even a word may be a potential sentence. It may generally appear that a word is properly the unit of language. But a word is but a single concept. And a single concept cannot form a judgment, and as such it cannot carry a complete idea, unless the circumstance forms the other concept as we have shown above. ${ }^{3}$ So we see that sentence is really the unit of language. It is natural, therefore, that it should be endowed with the power of denotation. We propose to enter into a detailed study of Vakyasphota and Padasphota at a subsequent occasion. But we should do well to state in unambiguous terms from the very beginning that from the empirical standpoint, it is Vakyasphota which represents the conception of Sphota. ${ }^{4}$ It has been definitely said that Padasphota is explained and illustrated in treatises on grammar for the exclusive purpose of enabling the beginner to get at the conception. of Vakyasphota; ${ }^{3}$ and we should state here that it is therefore that in our subsequent disquisitions, we shall often seek to explain our point by means of Padasphota.

[^11]
## From a Bedlamite

## Romaranjan Bhattacharyya-Fifth Year, Chemistry.

THE present century is said to be an age of equality and individual
liberty, but this dogma of equality becomes a myth whenever a bedlamite comes to the scene. He is hooted and hissed, abused and persecuted. Nobody cares to listen to him, the older men sneer at him, the middle-aged jeer at him, while the younger people spit at him. People will gladly squeeze themselves to death in order to hear the Confessions of an Opium Eater, or will gather round an old oak table that is creaking under its load, on a sunny March morning to participate in a Table Talk, or will even jostle with thousands to hear a Bedtime Story, but ask them to spend a few seconds with me they will laugh you down.

Hydraheaded monsters! Thrashonical jolt-heads!! You dream of talking with spirits and migrating to Mars and you lack broad commonsense and a wise discretion! You cannot make head or tail out of my mystic words and call it ravings! Short-sighted creatures! perhaps the fault is not yours. It is, I see, your ignorance of the fourth dimension that makes me unintelligible and naturally unpalatable to you but-. Excuse me, I fear, I am off the mark. This is not, as some people say, due to something wrong with my brain but it is due to the influx of thoughts which often make me swerve from my subject.

Madmen! Yes, I was speaking of them. The world is more or less a bedlam. Some are born mad; some are horn mad. Some pretend to be mad and some intend to be mad. Some think others mad and some make others mad. There is no ending of them.

The behaviour of madmen is certainly an interesting study. (Students of Experimental Psychology will do well to note this for their Doctorate degree!) Some, (I am speaking here of the born mad) are tattered, some are "sky clad," and some again are well clad. Some smile and smile as if they have seen the hollowness of the world. Some tramp and trudge on through footpaths and highroads, through meadows and hill-tracks often, barefooted, bareheaded, with a loin-cloth round their waist as if the vision of an Empyrean Heaven has caught their eyes. Some often sit near dustbins and drains and search, among the refuges, probably for the Missing Link or the Philosopher's Stone. Some (the dangerous type) often
spring at a man, try to hurt him, make faces at him and call him names. Some (the royal type), on the contrary, only muse and mutter.

But the madness that urges on for a balloon flight for probing into the mysteries of the stratosphere or leads to a Ruttledge Expedition for imprinting mortal footprints on the snowy Everest or prompts a voyage round the Antartic is surely welcomed in these days of Warloans and Disarmament. Life, in 1933, argues mammonism and egoism. Every man is trying to butter his own bread. Philanthropy and cosmopolitanism had their place in a pre-capitalist age. The machine-made civilisation has crushed before its wheels all the sterling qualities of head and heart. Therefore, nothing unusual can be found in Hitler's demand for equality of armaments, or in Japan's "pious motives" over Manchukuo, or in De Valera's latest movements in the Dail. It is an age of doubt and suspicion, of knavery and delusion, of criticism and censor. The struggle for existence is more intense, more keen than ever before. Unemployment, in spite of the numerous schemes of our expert economists, is becoming more and more acute. A few sentimentalists-a few madmen, here and there, cry out against this machine-made civilisation, but the roaring of factory engines makes that cry inaudible and futile.

But still when we hear that a certain professor is designing a rocket for flight to Mars, or that a new record is set up for crosscountry flight, or that a mass marriage of 2,000 couples is taking place in Italy, we are left to think that madness has its place even in these days of political wranglings. These news soothe our ears much dinned by talks of dumping and reservation, underinvestment and underconsumption. Economic adjustments have been looked upon as the panacea to all troubles, but they have miserably failed to herald the approach of a millennium.

Pacts and protocols have been made many, but the suffering and the struggle continue all the more intensely. Narrowness, nepotism and insincerity have cramped a broad outlook on life and humanity. Hence, baffling has been the quest for happiness. The real clue to peace and progress cannot be found in the jingling of gold and silver but in believing and loving man.

The Bedlamite stops his ravings.

## The Dream History

## Sisir Kumar Mukhopadhyay-Third Year, Arts.

DREAMS !-and in such a matter-of-fact age-no more of delicate dandyism in literature. Such is the compliment that is paid to imaginative creations nowadays. The champions of that sacrosanct school, miscalled 'realistic,' will stop at nothing short of identifying Art with photography and the artist with a camera. But the fleecy fancy work of the artist will have its due none-the-less on that account. To the vast majority of lovers of literature who are not haunted by particular cants about Art, H. G. Wells' latest bomb-shell 'A Shape of Things to Come' will mean a good deal.
'Sensations!-thrilling sensations!' is the craze of the moderner. Here he will have it and that with vengeance. Here is a book more thrilling than your manufactured cinema thrills-terror written large on every page of it, terrible events made more terrifying in their nakedness. Horrors act upon the reader as a hypnotic until they lose the name of horror. Yet there is such a spell of attraction thrown around the book that the reader is kept bound within the magic circle, the sort of fascination that we meet in a fearful ghost story told by the side of a dim lantern in our dream days of childhood. The only difference is perhaps that the dimness of lantern is not here. We have a flood of electric illumination instead. The irony is just like Wells'.

In a way the book nicely reveals the tendency of speculation in these none-too-optimistic days. The pre-war days were days of cocksureness. People were brought up under the happy delusion that the material prosperity of a nation is the index of its inner strength. They looked upon with a self-complacency the progress that was going on, on all sides. Nature yielding up her secrets to men of science; marvels of engineering done under their very noses which would have been labelled 'impossible' two decades before; expansion of market on a scale hitherto undreamt of-it was as if the millennium was knocking at our doors. Prophets were optimists everywhere, and Wells was no exception.

Things are not as they were. With the Great War the superstructure of material prosperity has tumbled down like a house of cards, when men found that they were living in a fool's paradise. An inevitable economic collapse followed the political disaster and all the jarrings sects of 'isms' came upon the stage. The clash of ideas was
no less important than the clash of arms. The revolution here has perhaps been greater. Old institutions discarded, old dogmas challenged in every sphere of life, the new age reacted violently against the ethical standards of old. While destruction has been complete no new constructive force has come into operation, so that chaos, confusion and conflict are the order of the day.

In the light of these facts, the note of deep pessimism of once utopian Wells will not come as a surprise. Of necessity, he can no longer be the Wells of the late nineties. The shape of things to come, if Wells is to be believed, is a shape which is anything but pleasing. The only good stuff that he has to offer us is that after a century of nightmare, things will be 'nearer to our heart's desire'-the only silverstreak in the mass of thundercloud. Wells spares neither East nor West in this dream history of the world from 1913 to 2 II 6.

To come to the story. The kind attention of Wells falls at the very beginning on poor China. In 1935 Pekin and Tientsin fall before Japanese arms. In 1936 the scale is turned. 'The Vindication of China Society' vindicates its honour by bombing, and to give food to the author of the fantastic 'Food of the Gods,' sterilizing Osaka and Tokyo. In 1939 the 'Retreat of Moscow' is repeated in the history of the world with an added horror and under a more tragic set of circumstances. In that terrible retreat from Wuchang to Nankin ninety-five per cent. of the Japanese forces perishes. In the meantime war has broken out between Japan and America, which ends in 1939 with the exhaustion of both the parties. The strain is too much for Japan. There is a complete socio-economic collapse, military degeneration, the peasants sinking into unorganised Communism of the most elementary sort.

For India, Wells has nothing better to offer. Communism in all its fierce nakedness without organisation or scheme, marked by the most savage destruction of the privileged classes ; a fanatical outburst against everything that is of past, even scientific techniques not excepted. The British power has not actually abdicated in favour of a mobocracy ; but she may do that as well. She is engaged on a more bloody stage in a more fateful tragedy. Formally her authority is not yet overthrown but in practice it is worse than that. Everywhere anarchy reigns supreme. Thus with complete social, economic and cultural ruin the rebarbarisation of Asia is complete.

In Europe, the shape of things to come is the ugliest conceivable. With the exit of Japan and U.S. A. from the political stage as important factors in the international affairs, passion for war in Europe gains in volume. Polish aeroplanes throw gas-bombs on Berlin and
the same happens at Belgrade with Italy on the aggressive. At first, France escapes the net of the struggle. The British Cabinet succeeds in a truce and the Conference at Vevey sits to revise the Treaty of Versailles so as to end war. The pacific speeches of Hore-Belisha, Randolph Churchill and others rend the sky of Europe and have their support in persons eminent like the Pope, the President of the Swiss Republic. But the fight begins afresh. British and American industries reap their harvest. For a short while there is a flush in trade, export figures going up beyond all expectations. In short, there is economic revival.

And now the climax is reached by 1945. People exhausted to the point of death ; the cry of desperation: complete surrender to fate; depression on an unprecedented scale of which history affords no parallel. People having nothing to lose, war has lost its terror. Then begins the 'Raid of the Germs.' Cholera and influenza visit again and again. Their effect is doubly disastrous on a people with wrecked physiques and shocked morals. It is strange that people survive all these. Britain, like other neutral powers, though not engaged in actual war fares no better than her more energetic neighbours. Her economic structure is tottering ; she has supplied Europe with munitions on credit and the trouble is never taken to pay off the debt. In a world, shaken to its very foundations, engaged in a suicidal war-paralysed in the economic sense, commerce is out of the question. With trade at a standstill she can scarcely be expected to pay anything for her foodsupply and the bread question rises to an ominous importance. The chapters are depressing as a narcotic. The same tale everywhere, the same cry for bread, the fresh crop of diseases, and the groaning of the multitude.

The weary struggle rolls on in all its horror until 1949, when President Benes manages to put an end to the fight by suggesting to the powers a 'suspension of hostilities' without entering into a treaty. There is a proposal for a world conference to settle all sorts of claims. The conference actually does not sit at all due to a variety of causes, among which a fresh outbreak of influenza and cholera, a gradual economic decay are the most important. The Benes Suspension of Hostilities therefore remains in force up to the year 2 II6.

The 'Raid of the Germs' shows no sign of abatement. The disruption of society is complete and an altogether new social order has grown. The constructive force has now come into play, to build up a new structure on entirely new lines. A Transport Union is formed by the combination of airmen which organises a conference of experts. In 1965 it meets at Basra and is reconstituted under the title of Air and

Sea Control. This important body again meets for the second time and the first World Council is born. The 'Parliament of Man' and the 'Federation of the World' actually come into existence.

A lapse into puerile enthusiasm and youthful exuberance marks the history of the later years. A world which is totally different from ours. A civilisation which is characterised by a reckless disregard for things, which we fondly call by the name humane. In short, the world is re-formed.

As soon as he closes the book the reader is thrown back into a world in which all the horrors are yet to be. It is a bit painful. And yet the regret is that he has given us so little. It is so solid, so tangible, and yet so evanescent as an evening cloud! Much of Wells' anticipations will remain anticipations and in spite of the position that the author holds in the realm of prophecy, none of his predictions may come true. But the thing that matters with the man who is out for literary enjoyment is the exquisite Art to which the author lends his scientific outlook. The chief merit of the book lies there, and here, at least, one may congratulate the old wizard of 'The Time Machine' the inimitable H. G. Wells.

# Reformation and Catholicism 

Dwarkanath Chatterjee-Fourth Year, Arts.

DE Maistre said truly that History for three hundred years has been in conspiracy against the Catholic Church. True history has suffered in the hands of the protestant historians of Europe. This statement is apt to be doubted by many, but perhaps those who doubt do not go deep into the subject. Anyway, an impartial examination of the matter would do no harm ; so let us proceed.

An eminent historian like Hallam, one who is expected to be above all partisan spirit, writes in his "Middle Ages" (Vol. III, p. 353): "In the very best view that can be taken of monasteries.. . . . . their existence is deeply injurious to the general morals of a nation. They withdraw men of pure conduct and conscientions principle from the exercise of social duties and leave the common mass of human vice more unmixed. And under the influence of a grovelling superstition their virtue lose all its usefulness." He suppots his virulent criticism by quoting St. Eligius of the seventh century" He is a good Christian who comes frequently to Church, who presents oblation that it may be offered to God on the altar, who does not taste the fruits of his lands till he has consecrated a part of them to God; who can repeat the creed or the Lord's PrayerRedeem your souls from punishment, while it is in your power; offer presents and tithes to Churches, light candles in holy places as much as you can afford, come more frequently to the Church, implore the protection of the saints; for if you observe these things, you may come with security at the day of Judgment to say 'Give unto us 0 Lord, for we have given unto Thee '" and then continues-"With such a definition of the Christian character, it is not surprising that any fraud and injustice became honourable when it contributed to the riches of the clergy and the glory of their order."

Next comes Dr. Robertson-the friend of Adam Smith, Gibbon and a host of other literati. After observing that "The Christian religion degenerated during those ages of darkness into an illiberal superstition " he goes on to quote the same old Eligius to adduce evidence in support of his dictum. Now, these savants quoted from the Lutheran Mosheim who translated (or mistranslated?) the text of Eligius. The tradition was going on strong for 78 years when it met: with a fatal accident. Some one for the first time, instead of blindly
following the tradition, thought it worth while first to consult St. Eligius himself. Dr. Waddington, the Protestant Dean of Durham, found out that the received Protestant extract was only a portion-nay only sentences picked out here and there of a very long sermon-other sentences of which close by and in the very midst of those actually quoted contained exactly those matters the supposed absence of which was the very charge brought against St. Eligius by men like Mosheim, Maclaine, White and Hallam, to name a few. Those pious Protestants shuddered at the very idea of the brazen shamelessness of Eligius' text, where according to them, no honesty or moral virtue can be found!

Leaving aside the learned works of Hallam, Robertson and men of their calibre, which are read only by scholars, let us turn to periodicals and popular literature which are patronised by all and sundry. Take for example "The Times"-the best of them. In June, 185I, the following sentence appeared towards the end of a leading article of the paper: " It is the practice, as our readers are aware, in Roman Catholic countries, for the clergy to post up a list of all the crimes to which human frailty can be tempted, placing opposite to them the exact sum of money for which their perpetration will be indulged." This grave accusation was industriously circulated and was supported by another account illustrating the flagrant abuses of the Catholic Church-that in the year 1835 a Doctor, when on a visit to Brussels, was led to inspect the door of the Cathedral of St. Gudule, and that there he saw fastened up a catalogue of sins, with a specification of the prices at which remission of each might severally be obtained. Now this brilliant effort of imagination melted into thin air before actual investigation. The disgraceful accusation sent a thrill of indignation throughout Belgium and it transpired that the abominable sin-table was really a catalogue in French for the price to be paid for the use of cushion seats on great festival days.

These two illustrations would perhaps suffice to give us an idea of the charges generally brought against the Catholics by the Protestants. The impartial and intelligent student of History must think twice before he gulps down everything that is said against the Church of Rome.

The doctrine of the Protestants is not very rational. They regard the Bible as the final authority, not only that ; the extreme Protestants hold that the Bible as understood by its reader is the last word on the subject. This principle would work no doubt provided every individual of a Protestant country be a fairly educated person able to read, and what is more, really understands the contents of that
difficult book. Their system is opposed to unity. The active workings of the human mind are ever raising difficulties against received beliefs, and the history of the Church attests to a continual succession of disputes concerning the nature of God, of the Incarnation, Predestination, Grace-the Sacraments- in short, concerning the entire range of Christian dogmas. Thus the question of inter-communion must inevitably be soon forced to the front. But the Protestants have not yet succeeded in assembling a council among themselves although there is no Pope to oppose that. Governments would be likely to intervene, fearing lest the result should brand beliefs rooted in the hearts of their people and should disturb the tranquillity of their realms. There would be quarrels as to the share of the representation to which the churches were respectively entitled.

Apart from the question of unity, this system breeds fanaticism. The ordinary peasant or artisan who does not care a whit for learning and pedantry honestly reads his Bible and may honestly conceive mistaken ideas to which he would as honestly cling rejecting advice from wiser heads. This narrow spirit of bigotry can be easily fanned into fanatical fury as England knew to her cost during the Gordon Riots in the reign of King George III. Then the Lutheran doctrine lays more stress on "faith" than " good works." He improved upon the Catholic doctrine of "Justification by faith and works" by preaching " Justification by faith only." Of course, we admit that the spirit of the doctrine is quite sound, yet it must be said that such doctrines are not calculated to have healthy influence upon untutored minds. The Calvinistic Theory is no better. This theory presumes that God predestines who is to be saved and who is to be lost. It is common-sense that this cult of predestination may produce a kind of fatalism which has been the bane of India.

We now come to the most important point in the Protestant theory-their rejection of the authority of the Pope. Let us examine how far this theory is consistent with their doctrine. Unlike the Catholics they regard the Bible as the final authority and let us see what this august book has got to say about it. In St. Matthew it is said that when the time of Christ's public ministry was drawing to a close, He withdrew his disciple far to the North and there, gathering His disciples round Him, pronounced the Apostle St. Peter blessed and conferred upon him certain privileges. Christ ended by declaring that St. Peter shall be the rock on which the Church is builthe shall bear the Keys of the Kingdom of Heaven: he shall receive unlimited power to bind and loose. In other words, he was appointed the supreme ruler of the Church after Christ. Now
if St. Peter was really made the supreme ruler of the Church (and that he was, has been clearly demonstrated), the Church must have required a ruler of this kind. Christ did not confer empty dignities. What the service required of a supreme ruler was, thanks to St. Jerome, we know-" One is chosen out of the twelve, that a head being appointed the occasion of schism might be removed." Bearing these considerations in mind, we cannot fail to perceive that a supreme ruler has been much more necessary to the Church since the age of the Apostles passed away, than he was, while that age lasted. If, then, the appointment to the office of supreme ruler was confined to St. Peter's person and was not intended to pass on-it was given for the time when it was less needed but withheld from the ages when it would be altogether indispensable. In fact, Christ intended to confer a primacy destined to last through all times. From St. Peter who died in Rome, the primacy descended to the Roman Pontiffs, who were acknowledged by the Fathers. In the third General Council at Ephseus, Philip, the Presbyter of the Apostolic See, when about to depose Nestorious says, " No one doubts, nay it is known to all ages that the holy and the most blessed Peter . . . . . . . received from our Lord Jesus Christ the Keys of the Kingdom, and the power to loose and to bind sins was given to him. And he lives to this day and for ever in his successors and passes sentence. His lawful successor, therefore, who holds his place, our holy and most blessed Pope Celestine, etc." These words were uttered in the open Council amidst the approbation of all, at the solemn moment when the Council, led by the legates, was proceeding to depose Nestorious ; and they were uttered as exhibiting the authorisation which justified the sentence to be passed. What could be more decisive? But these questions and Matthew, John and Luke are hot coals to the Protestant hands and they would better not discuss these dangerous problem!

So much for the doctrines of the two sects. The Protestants disapprove of the Catholic clergy also and they express their disapproval in no guarded language. The Catholic priests are described as parasites, the high priests of superstition, caring very little for religion and still less for piety. Nothing can be further from the fact. There were, of course, unworthy priests in the Catholic clergy and there are still prelates who do not deserve the high name of "the Servants of God," but from this data to the deduction that the whole Catholic clergy including the Jesuits, are useless is anything but reasonable. The Catholic clergy was and is the most enterprising, pious and selfsacrificing body of priests in the Christian Church. Apart from their zeal in educating people, they ran and even now run all sorts of risks
to be useful to their flocks. When England was dangerous to them, they did not shrink from their duty and, braving all dangers, went to that alien and hostile land to minister to the wants of the faithful. The phrase " Jesuit in disguise" owes its origin to the fact that a large number of Catholic priests thought nothing of facing the dangers that beset their path to go to England and other Protestant countries for the benefit of the Catholics there. Not confining their activities within the Continent of Europe, the Catholic clergy began to conquer new lands for Christianity and even the distant shores of Nippon were not left untouched. Not to speak of the bygone days, we find only recently, during the Great War, Catholic priests living in the front trenches in the war zone, bearing every hardship, to comfort and render spiritual aid to the needy and the dying. It is a significant fact that the Protestant priests did not think it necessary to go to the length of living in trenches to perform their religious duties.

After all, the Protestant clergy is a dead institution compared to the Catholic clergy. The Protestants had the cheek to welcome an apostate like Ghehard Truchess who forsook his holy orders for his infatuation for a mistress. Leaving the individuals aside, we find very few mention of the Protestant clergy doing anything really important and praiseworthy in history. The English clergy during the seventeenth, eighteenth and nineteenth centuries played a very sorry part in its country's history. In the eighteenth century the general run of the English clergy was regarded as a menial class. In fact, with the exception of prelates like Pococke, Prideaux, Stillingfleet and a few others, the priests were a hopeless lot-ignorant, conceited and "hangers on" (to) the great temporal magnates. These facts are well known and even the Protestants admit them when hard pressed. Really what more can we expect from them? The founder of their Order, the Great Luther himself was not sure of himself. Belloc says that " in the disputation at Augsburg, Luther was made to look foolish-he was cross-examined into denying the authority of a general council-which authority was the trump card to play against the papacy."

The Protestants hold, that the people of Europe were fed up with Catholicism and realising its hollowness, accepted a new reformed religion which was a change for the better. But History does not seem to bear them out. The nations which did accept it were not actuated by a feeling of religious fervour. It was the sordid material misery which goaded them to rebel against the old system. Rightly or wrongly the mass of the Germans thought it too bad that the luxurious Rome should suck them dry while they played the ur-
pleasant part of henchmen to their feudal lords. Believing in Luther and his promises, they rebelled-not against the religion, but against the social evils. They were soon to be disillusioned. Their "Messiah," biding his time, set the nobles on them who carried Luther's exhortation to the letter when they " smote," " strangled " and "stabbed" the rebels " secretly" or " publicly." It was a rising of the rich against the poor with disastrous results for the latter. The Peasants' Revolt registered a distinct check to the further spread of Lutheranism.

In France, Jean Cauvin, in making his counter-Church and forming his counter-Rome in Geneva was presenting a bait to the French nobility and squires-the bait of sacking religion where religious endowments were very large. The Reformation also enabled them to harass the crown more effectively. The little progress, which Protestanism made in France, was due to that. The hidden power of it lay in the avarice of merchants and squires. But the nation as a whole remained true to their religion. In Spain, Protestanism was baffled. The centuries of warfare with the Moors had bred in the Spaniards a stern and rigid Catholicism which was too strong for the seductive influence of the Protestant movement. In Denmark, the king forcibly made 'Protestanism' the State religion. "Frederick realised that the Catholic Church was deeply rooted in the affections of his people " and that change would have to be effected slowly and cautiously. His son, who was Lutheran, was known to stand for absolutist principles in government. The people rose but they were put down and Lutheranism was declared as the State religion in 1557. Catholicism died with difficulty in Denmark, regretted by the majority of the people including Helgeson, the scholar and humanist. "In Sweden also the success of the new religion was due to the Crown quite as much as in Denmark and Norway." The rising under the Archbishop of Apsala was suppressed and the breach with Rome began. The introduction of the new religion was very gradual and its eventual success was largely the result of the work of one strong man assisted by a subservient parliament.

The ancestors of the boastful English people were like a flock of sheep driven here and there by Henry VIII. Henry was naturally disgusted with a Church which did not allow him to get rid of one wife so that he could marry another. So, under his direction, the Parliament put pressure upon the Pope. The acts of Præmunire, Annates, Appeals, etc., were passed. As the Pope did not give in even then, the king ordered the "Reformation Parliament" to pass the "Act of Supremacy" which pompously announced that the king
was the supreme head of the Church. Catholicism was really at an end in England. All great state officials were called upon to bow to the self-made religious head and saintly persons like Bishop Fisher, Sir Thomas More and others who justly refused to submit to such folly, were executed ruthlessly. This stupendous change was made possible by several factors. The 'Black Death' carried away a very large number of Catholic priests. In Norfolk alone 527. priests out of 799 succumbed to the terrible malady. The suspension of religious care and teaching, caused by the sudden removal of a great multitude of the clergy, had a demoralising effect on the shaken remnant of the population. Then the Wars of the Roses had sapped the power of the nobles who stood between the king and the people-the king was then supreme and aided by the new peers and officials thriving on the spoils out of the plundered monasteries, he could do anything he liked through a slavish parliament. The newly ennobled peers tried to make the change permanent during Queen Elizabeth's reign. That is why they almost forced the unwilling Queen to sign the death warrant of Mary, Queen of Scots. Anyway, the religious innovations of the king did not go altogether unchallenged. Many viewed with increasing bitterness this attack on what they held the most sacred thing in life-the religion of their fathers. "The Pilgrimage of Grace was very dangerous because it was inspired by very genuine religious alarm," says an eminent Protestant historian. Even after Henry's death there were determined rising in Devonshire, Norfolk and other places, which were entirely religious in character.

Scotland it was, that gave the first example of a country accepting the Reformation of its own accord. It is true that the Scottish clergy was the worst possible in Europe and the priests went against the fundamental principles of the Catholic Church with an audacity worthy of the Protestants themselves. The Scottish people made the mistake of regarding the vice of their clergy as the principle of the Catholic Church and became the followers of John Knox.

The Protestants also accuse the Catholic Church of oppression and bigotry. This charge is, to a certain extent, true. In reply the Catholics argue that there is nothing in the Catholic doctrine that favours oppression, etc., -the only thing that can be said is that some of those persons who oppressed other people for religious differences happened to be Catholics. But the same thing can be said of the Protestants too. Against the Spanish Inquisition can be cited the brutal severity to which Catholic Ireland was subjected by England even in Pitt's time. What is the "Revocation of the Edict of Nantes" or even " Dragonnade" compared to the barbaric harshness to which
thousands of English Catholics were victims for hundreds of yearswhen even women were known to have been crushed to death simply because their faith was different from State religion? The Martyrdom of Margaret Citheræ in Elizabeth's time is a clear illustration of Protestant brutality.

If we reject Lingard's evidence because he was a Catholic, let us turn to the Protestant Cobbet just to get an idea of the misery of the Catholic people:-" Catholics were fined $£ 20$ a month if they stayed away from the Church of England Service (to attend which was against their conscience); Catholics were not allowed to be guardians or exe-cutors-nor allowed to travel five miles from their house; if a Catholic, when called upon by any four Justices of the Peace to abjure his religion, refused to do so, he could be sentenced by them to banishment for life (without Judge or Jury) and if he returned he was to suffer death." And so on goes the terrible list. The Protestants are never tired of repeating the account of the " Massacre of St. Bartholomew's Day " which happened in 1572 . But curiously enough, they somehow or other manage to forget about " the first Massacre of St. Bartholomew's Day, 1569," when the Protestant General, John of Gascony, massacred all the Catholics who surrendered to him under a promise that their lives should be spared. The Protestant historians ought to know that those who live in glass houses should not throw stones. The Gunpowder Plot is carefully remembered but the plot at Hague to blow up the whole Council of Holland is conveniently forgotten. How often has it been dinned into our ears that the Catholics massacred the Protestants, but such satanic massacres of Drogheda and Wexford by Cromwell are quietly overlooked!

The Protestants say that the bigotry of the Catholics led them to persecute scientists like Galileo but why do they forget that Luther and Melanchthon thundered against the old Pythagorean truth that the earth moves, restated by Copernicus? Not content with merely publishing pamphlets denouncing the theory, they went so far as to turn out its chief propagator, Joachim, from the University of Wittenbrug. The Renaissance was not completed by, nor did it march side by side with, the Reformation. The 'Reformation' was essentially a diversion of the main stream into narrower, incongruous channels, flowing in a different direction from that which the glorious stream of re-discovered culture would have followed, had it been left undisturbed.

There is a class of Protestants who oppose the Catholic Church because the doctrines of the Roman Church, they say, are antiquated. They would point out that the "Divine Right of Kings" is a Catholic
principle. To say the least, they are grievously mistaken. First of all they should know that the theory owes its origin to Christ's saying " Render unto Cæsar what is Cæsar's" The bible is the same both to the Catholics and the Protestants-so that the theory is as much 'Protestant' as it is 'Catholic.' Secondly, it can be proved that the Protestant doctrine recognises this theory of divine right of kings, while the Catholics reject it. Harold Lasky, the great political scientist, says in his 'Foundations of Sovereignty"-"A member of the Anglican Church gave his Queen more than a Catholic gave. For him there was no corner of the field over which her imperium did not exist." Prof. McIlwain also says that " the Jesuits who had become the chief champions of the Catholic Church and the Papacy, developed doctrines of a limitation of the royal power in the interests of the people on the one hand, and on the other, of a separation of the fields of ecclesiastical and secular jurisdiction." Lasky then concludes that " they aimed, in fact, a vital blow at the divine right of kings.' But " Luther," he continues, " asserted the divine right of the German Princes and, perhaps as an after-thought, the affinity of Rome with Antichrist." Now here is the impartial testimony of a Protestant author-what do the Protestants say to this?

Really it is now high time to shake off our pre-conceived ideas and test the 'Reformation' in the light of reason. No body is more alive to the faults of the Catholic Church than the writer himself-was it impossible to rectify them without definitely breaking away from the Church? True great men like Erasmus, while advocating the cause of reform, did not like to invent a new religion-they wanted to reform the Church from within. That would have been the best course to follow. But few violent men, like Luther, Calvin and Zwingly, started the avalanche which swept away the unity of Christendom for ever. The monasteries were destroyed to the dismay of the peasants who preferred 'Crosier' to the " lance." The charities which the monasteries practised were discontinued. The sanctuaries they provided to helpless people, like the House of the White Friars, were done away with. The great religious war of thirty years was characterised by a bitterness and cruelty quite unknown in previous wars. Europe was divided against itself while the Turk pushed on steadily towards the Danube. The impetus to Biblical study was soon spent and after the first excitement war over, Europe presented a dreary spectacle. Even Art suffered. The great artists, like Rubens, Raphael, Michael Angelo, drew their inspiration from their religion-Catholicism. It is congenial to art. Go to any Catholic Church, however, small
it might be and compare it with a Protestant Church, you will not fail to see that the interior of a Catholic Church looks far more artistic than that of a Protestant Church. The extreme Protestants are never so happy as when they are able to make their Churches look worse than a shanty. It would not be far wrong to suggest that the affected severity of the Protestant Church has smothered many a rising artist of genius.
'The student of History muses-he finds himself asking this ques-tion-had the Reformation proceeded from within the Church how many calamities could have been avoided? If the master minds of that age, instead of flying at each other's throat, had helped to make the Council of Trent a success-would it be a mistake to conclude that Christianity might have become united at home and stronger abroad?*

[^12]
## A Peep within the Atom

Debes Chandra Bhattacharyya-Third Year, Science.

WITH the advent of the twentieth century, a new era was going to dawn in the realm of science and it was a glorious dawn indeed! It saw the Newtonian Physics quite revised and sometimes revolutionised. It saw science just crawl out of its cradle and try to raise over the veil so that we may peep into the mystery of the Great Architect and perceive things in their truest hues. In the earlier parts of the present century, a few votaries mustered into the temple of science to sing its praise and offer the brilliance of their intellect to shine its interior which was hitherto unlightened. Of this respectable group, each of which contributed a very useful quota to the onward march of scientific progress, can be named Ernest Rutherford, to whom owes a great deal the present Atomic Configuration, Max Planck, the eminent pioneer of the Quantum Theory, Albert Einstein, the author of the Theory of Relativity, Nies Bohr, Shrödinger, Heisenberg and a few others of very recent fame. They introduced Bolshevism, so to say, in modern science and are responsible for the epoch in our scientific developments that has just been ushered in.

The greatest thing that has been introduced in our present scientific conception is that we to-day pay much more regard to the small things than to the great ones, to the individuals than to the crowd, with a view to diagnose their behaviours in full details. The whole of the physical as well as chemical world demand interpretation in term of a certain kind of tiny things known as atoms, which are very, very minute and apparently insignificant: the idea of these atoms clears up many of our baffling situations so brilliantly that scientists cling to it with a zeal which amounts almost to a craze. Though the visibility of them is not yet revealed even to the most powerful microscope of the day, the existence of these is no more of hypothetical character.

The atom, with which the present article will try to deal, was much simpler in older days than at present. Within the period of nearly two score years, it has undergone a great modification which has deprived us of its easily-intelligible character. Our old atom was quite a simple thing. It had been regarded as the ultimate, unbreakable unit of elements, very solid and minute and the atom of one element had been considered to be inconvertible to that of another element,
each element having atoms of its own type. The conception of atom, in its crude form, had been known as early as two thousand years back and it was due to Democritus, a Greek philosopher. But it was left aside until the first decade of the last century when John Dalton established it on scientific basis with little alteration. After that it was thought that nothing unknown remained in the case of these tiny, solid specks which are closely packed together in matters; but things did not seem so simple when in the latter part of the nineteenth century, Sir William Crookes, with a vacuum discharge tube in his hands, quite unknowingly put himself at the threshold of a new world. Crookes did experiments on electrical discharge through a tube in which the gas filling the tube was gradually being rarefied, and he witnessed a spectacular scene. Brilliant colour effects were the result. If between the two electrodes, an opaque solid screen, say of mica, is placed, a well-defined shadow falls against the cathode (negative electrode), showing that a kind of rays streams forth from the cathode to the anode (positive electrode), and this ray has been known as the cathode rays. It shewed its electrical nature of the negative kind. This was most interesting because the investigators experienced the same effects in every case, irrespective of the nature of the gas with which the discharge tube was filled and this brought the scientists to the conclusion that these negatively charged particles were the common constituents of all gases. But this discharge tube had to tell more of the tale. It was found, using a perforated cathode in the discharge tube, another stream of particles being repelled from the anode, passed through the perforations into the space behind. Careful study revealed that they were positively charged, and with heavier masses. This anticipated a great revolution in the scientific thoughts of that time and in the middle of $1897 \mathrm{Sir} \mathrm{J}. \mathrm{J} .\mathrm{Thomson} \mathrm{suggested} \mathrm{the} \mathrm{startling} \mathrm{hypo-}$ thesis that these charged particles have been formed by the breaking up of the atoms of gases. The negatively charged particles are known as electrons and they have insignificantly small mass which is about I/ryooth of the Hydrogen atom, the lightest element.

Contemporarily, another important discovery was made in a fateful day of 1896 by Henri Becquerel in his Paris laboratory, while experimenting on the florescent character of a Uranium ore. He was surprised to find that this Uranium ore spontaneously affected photographic plate even in the dark, where there was no excitant present to cause any radiation. This gave a clue to the discovery of a very important class of elements which emit certain kinds of radiations spontaneously, these radiations being influenced by no external conditions. This property of giving radiations has been called
the phenomenon of radio-activity and the elements having this property are known as radio-active. At that time, there was an enthusiastic Polish girl of the name of Mme. Curie, working in France with her husband, and every body has come to know her to-day. She subjected the matter to her scrutiny and tried to peep into the mystery, She discovered two very intensely radio-active elements, Polonium and Radium. By and by, the nature of the radio-active radiation has been studied and much light has been thrown on the subject. These radioactive elements are generally heavy metals, and by emitting radiations they are reduced to lighter ones. Three sorts of radiations are given out from these substances and they have been known as alpha-particles, beta-particles and gamma-rays. Alpha-particles have been found to be identical with doubly charged positive Helium atoms ( $\mathrm{He}^{++}$), betaparticles are negatively charged electrons and gamma-rays correspond Somewhat to Röntgen rays; and each of them moves with a great velocity. This momentous discovery opened up a new chapter in the history of science that finds Ernest Rutherford in the limelight of unmixed recognition and genuine admiration.

Rutherford, at this most opportune moment, being armed with these swift-moving alpha and beta-particles provided by radio-activity, made his appearance in the field, turning his batteries to unravel the atomic mystery. He began to shoot off these alpha-particles through gases and studied the track of their flight. He found that in most cases, the alpha-particle goes through almost straight and undeviated, but in some cases, it is bent through a sharp angle as if colliding with a heavy mass in its course. This led him to believe that there is a small repellant force, comparatively massive, at the centre of every atom, so that it cannot be pushed aside by a swift-moving body like the flying alpha-particle, and this body at the centre carries positive charge with it. There are some negatively charged electrons revolving round this and neutralise this positive charge. From this he declared that atom is not solid, on the contrary, it is inconceivably hollow and an atom of any particular element is nothing but an aggregation of the positively and negatively charged bodies. The charge on a unit positive body is just sufficient to neutralise the charge on a unit negative body. The positive bodies remain stationary at the centre of the atom and the electrons revolve round it just as planets do round the sun. As we have sun, the mass of an electron is insignificantly small, the whole of the atomic mass is practically concentrated in the positive bodies in the centre. Thus we find, Democritus's atom is stripped off its simplicity ; it is neither unbreakable nor solid. There is so much empty space within the atom, that if a well-developed human body has been
managed to lose the hollowness of all of its atoms, it will be reduced to a minute speck which will be just visible by a strong microscope.

In IgI3 Nies Bohr developed this Rutherford theory by assuming the positively charged Hydrogen particle as the unit of positive charge, as no lesser mass than this has even been isolated, and this has been named, 'protor.' Now, the atoms of all elements are formed by the assemblage of an equal number of electrons and protons, so that the whole of the atom is rendered neutral. But all of them are not closely packed together as was supposed in pre-Rutherford age. There is a nucleus in every atom which is made up of all the protons and a number of electrons with the result that the nucleus remains positively charged. The remaining electrons which go by the name of planetary electrons revolve round the nucleus to neutralise this net positive charge, in different external orbits which are circular or elliptical. Bohr fixes up definitely the number of rings and electrons contained in them by the Quantum Law. To illustrate Bohr's model, Hydrogen atom may be regarded as the simplest, and it is probably the most primitive form of matter. It is, as if, the primordial building stuff of the universe. It consists of only one proton and one electron. This solitary proton constitutes the nucleus and the electron rotates round it remaining comparatively at a considerable distance. There exists a force of mutual attraction between them, but this is counterbalanced by the centrifugal force due to the revolution of the electron. To go to the next higher atom, we find Helium having its atomic weight 4 with reference to Hydrogen as the unit. Its nucleus consists of 4 protons and 2 electrons, the net positive charge being 2; and then $a$ extra nuclear electrons are needed to neutralise this positive charge. In heavier atoms, all of the outer electrons do not remain in the same ring ; they are arranged in different shells. As for instance, the nucleus of oxygen has the net positive charge 8 , so there must be 8 revolving electrons; of these 4 revolve in the first ring, 2 in the second and the remaining 2 in the third.

Formerly, atomic weight was considered to be a very important factor from chemist's point of view and this had been thought to be the distinguishing property of one element from another. But later, a number called the 'atomic number' was found to play a far more important role both in physical and chemical activities. The atomic number of an element is the net positive charge of the nucleus and this is, as we have seen, identical with the planetary electrons so that the atomic number of $\mathrm{H}=\mathrm{I}, \mathrm{He}=2$ and $\mathrm{O}=8$. This atomic number is approximately equal to the half of the atomic weight.

By the analysis of the positive rays, mentioned in connection with the discharge tube, by Sir J. J. Thomson and later by F. W. Aston, two or more atomic weights were seen for the same element, e.g., in the case of chlorine two different weights 35 and 37 were found, but the accepted atomic weight of chlorine is 35.5 . These different atomic weights for the same element are known as isotopes, and they cannot be separated from one another by any chemical means. Our ordinary chlorine is a mixture of these two atomic weights in such a proportion that the average value is $35 \cdot 5$. These isotopes have been proved to exist in case of many elements whose ordinary atomic weights are fractional. But notwithstanding repeated determinations, Hydrogen shewed an exception, its atomic weight being 1.008 when Oxygen's is 16. F. W. Aston, who has done pioneer work in this field, believed that an atom whose weight is already a whole number cannot have an isotope, but this theory of his received a set-back at the discovery of isotopes of carbon (at. wt. $=12$ ) and two more isotopes, 17 and I8 of oxygen (at. wt. $=\mathrm{I} 6$ ). But this discovery opened up a new way which led to the find of a heavy isotope of mass ${ }_{2}$ of Hydrogen. This isotope of Hydrogen ( $\mathrm{H}^{2}$ ) distinguishes from other isotopes of all elements in the fact that this $\mathrm{H}^{2}$ can easily lie isolated from the lighter $\mathrm{H}^{2}$ by ordinary electrolytic process. A sample of water composed of these heavy hydrogen atoms, whose chemical formula can rightly be represented as $\mathrm{H}_{2} \mathrm{H}_{2} \mathrm{O}$, exhibits distinct peculiarities in respect of its physical properties. It boils at moI $42^{\circ} \mathrm{C}$., freezes at $+3.8^{\circ} \mathrm{C}$. and its maximum density is at $1 r \cdot 6^{\circ} \mathrm{C}$. However, much remains to be learned about this $\mathrm{H}^{2}$ and scientists are claiming for a new nomenclature for this on account of its curious behaviour.* This discovery of isotopes lent a corroboration to Prout's Hypothesis (1815) which was abandoned in those days finding no support in its behalf. Prout held that the atomic weights of all elements are the whole multiples of that of Hydrogen and he derived this idea from the consideration that the atoms of higher weights have been formed by the mere condensation of hydrogen atoms. But accurate determinations of that time disproved his hypothesis and now, again, from this atomic conception it gained an impetus.

The divergence in the atomic weight for the same element should not puzzle one, because it is only the planetary electrons that are responsible for the atomic activities and while these activities are considered, there is no concern with the nucleus which brings about the variation in the atomic weight. So if the planetary electrons, that is, the atomic member remains unchanged, no difference of action will be

[^13]marked. The formation of isotopes may also be found in the radioactive changes. Let us consider an atom of Uranium, a radio-active element which has the atomic number $=92$ and the atomic weight $=$ 238. Let it be supposed that it, at first, gives out one alpha-particle from its nucleus. It has already been mentioned that this alphaparticle exactly identifies with the Helium nucleus $(+4,-2)$. By letting loose this alpha-particle, the atomic weight falls by 4 , and the net positive charges is also reduced by 2 , changing to a new element $\mathrm{Ux}_{1}$ of atomic weight $=234$ and atomic number $=90$. This element is quite different from the Uranium we started with. In the next stage, $\mathrm{Ux}_{1}$ expels one beta-particle, that is, a negatively charged electron and this means that the atomic weight remains the same as 234 , but one proton being set free, the net-positive charge increases by 1 , coming to a new element $\mathrm{Ux}_{1}$ of the atomic number 9 x . At the following step we see that one more beta-particle is expelled and $\mathrm{Ux}_{2}$ passes to $\mathrm{U}_{5}$, the atomic number in the same way as before, being increased to 92. Now, we find that it is the same element $U_{1}$ with which we began, the atomic number being the same, the only difference being in their atomic weights. Now, these two elements, $\mathrm{U}_{1}$ and $\mathrm{U}_{2}$ are identical in all their chemical activities so much so that they cannot be separated except by chemical means. Radio-activity furnishes the transformations of one element into another in the long run by the successive expulsions of alpha and beta-particles in the way as described. Thus Radium (88) is transformed in Lead (82), but with the present means at our disposal, it falls beyond our scope to regulate this radio-active disintegration.

Being elated with this idea gathered from the radio-active changes that one element can be transmuted into another by the simple manipulation of its atomic number, a number of physicists headed by Rutherford carried on experiments to bombard the atomic nuclei by alpha and beta-particles; and they have been successful in many cases with the result that the disruption occurred with the ejection of H particles, i.e., protons. Thus the lighter atoms-Aluminium, Nitrogen, Boron, Beryllium, etc., have been broken into different elements and protons. Scientists looked through immense possibilities and found a new world within their reach. In I925, two pronouncements, one from Berlin and another from Tokio, gave thrilling stir to the whole world. They told that Dr. Adolf Miethe of Germany and Dr. H. Nagaoka of Japan have been able to transmute mercury into gold. But unfortunately, other experiments failed to substantiate their unique claim. However, this is not very disappointing, because the way they proceeded was quite scientific--very different from the blind groping
of the Alchemists in the past. Now, mercury has an atomic number 80 , while gold has 79, therefore, theoretically speaking, to shoot away one proton from the nucleus or to embed one electron in it, would mean transformation into gold. Nevertheless, new vistas of human knowledge are being opened and the avenues leading to them will not remain long undiscovered.

Concerning the structure of the atom, two new discoveries have recently been reported. One is of neutron. The constitution of this is very peculiar. It has an atomic weight nearly equal to the hydrogen atom and it has also one electron and one proton as its components. But it differs sharply from the hydrogen atom, owing to the factit is curious enough to note-that it has an atomic number $=0$. It is evident, that it has no patrolling electron: the only electron which it possesses, goes to build up its nucleus, so that it is a chemically inactive, and electrically neutral body. More importance should be attached to this queer body as it is regarded by some scientists as a structural stuff of the atoms and this will be found in J. Chadwick's remark ; "The nature and properties of neutron are of interest, not only because of their novelty, but because neutron is probably a very important unit in the structure of matter. It is now generally assumed that atomic nuclei consist of neutrons and protons; then, because the mass of a nucleus is always equal to or greater than twice its charget there must be more neutrons in matter than protons."*

Another discovery is of the existence of the positive electron, i.e., a body having the same mass as of electron but carrying positive charge with it. $\dagger$ It has already been noted that the least mass of positive charge that has been isolated is the proton which is about $\mathrm{I}, 800$ times heavier than an electron. But news comes from the Cavendish Laboratory, that the proof of the existence of the positive electrons has been obtained and it is due to the researches of Anderson, Blackett and Ochiallini. In course of experiments on the atomic bombardment in a magnetic field, it was observed that along with tracks of the electrons which were deviated from the normal course owing to the magnetic influence, other tracks were bent through the same angle but were opposite in direction. From this, it was deduced that these tracks were traced out by a particular kind of particles which have the same mass as an electron but with positive charge. What part it plays in the atomic structure remains yet to be known.

Within the last thirty years of the present century, the whole of the scientific world experienced a thrilling change and one of the
*Proceedings of the Royal Society, Vol. I42.
$\dagger$ Proceedings of the Royal Society, Vol. 136.
principal factors which have enhanced it is the Quantum Conception of Energy. Just at the beginning of the present century, Dr. Max Planck of the Berlin University, put forward some tentative explanations of radiation. Hitherto in Newtonian Physics, radiation was supposed to be a continuous flow from the source, having somewhat of wave-nature. But due to Planck, a mysterious quantity which is universally known as $h$ has entered into the realm of science and dominates a very wide field of it. It denies all classical interpretations and asserts itself strongly. First in 1900, Max Planck announced his astounding theory that radiation is caused by shooting off discrete particles, each of them being called a quantum. One quantum has a definite value and this is the same with all the others. The queer thing is that energy is shut in packets, in definite quanta. Now, this quantum may be called 'the atom of radiation' in the sense that it can no more be divided into any lesser quantity. Whenever there is any case of radiation or absorption of energy, the least quantity which can be radiated or absorbed is one quantum, that is, that mysterious quantity $h$, whose value has very accurately been determined as $655 \times$ 10 -27 erg-seconds, and again, if the amount of energy be greater, it should always be the multiple of h, e.g., $3 \mathrm{~h}, 5 \mathrm{~h}$, 10 h or I2h. If any atom has in it energy less than $h$, it can give out no radiation ; in the same way, absorption of lesser amount never happens.

Now, in 1922 Niels Bohr, a brilliant Danish physicist, won the laurels of the Nobel Prize by applying this Quantum Theory within the sub-atomic world. To comprehend Niels Bohr's achievement, let us consider the hydrogen atom, the simplest of all atoms. As already mentioned, it consists of one stationary proton and one revolving electron. Now, the electron revolves round the nucleus in circular or elliptical orbits; during these revolutions, it emits no energy. But when the atom is excited by some external agency, it jumps from its normal orbit to another. Bohr holds that, there are some fixed orbits which the electron should take up, whenever it requires to change its orbit and this oribital migration is rigorously regulated by the $h$-rule. To jump to the immediate next orbit becomes possible for the electron, if it absorbs full one quantum of energy. This orbit is known as the first quantum orbit and next to this there is the second quantum orbit. There is no intermediate orbit between them. In this way, in the case of hydrogen, there are five quantum orbits. This quantum conception, introduced by Niels Bohr in the atomic region, advanced some brilliant explanations about the electronic radiation, but yet there were points which remained unexplained. Now, Shrödinger initiates a hypothesis which is of highlv mathematical and abstract character
and the idea involved in it is that electron is not a particle but it is merely a congregation of waves. In the sub-atomic universe, there are waves of different frequencies which and these waves, by their convergence and coalescence, create a disturbed area. Energy is concentrated at this stormy area and this area behaves as if it were a particle. That is why we get both the wave and the particle nature of an electron. We know, diffraction occurs in the case of electron and its wavelength has actually been measured by G. P. Thomson, Owing to this ambiguity of character, an electron can rightly be called, neither a particle nor a wave, but a " Wavicle" to express its doublefold character. It is funny indeed to speculate that every thing which we see all around is nothing other than waves and that we are living really in a sea of waves.

Now, from this wave-conception of electron, has started a great controversy in the scientific world and a dispute, rather of philosophical character, is raging over this point at issue. Many of our eminent scientists are philosophising as to the drift of the universe towards uncertainty. All this owes its origin to the so-called ' Principle of Indeterminacy' of Prof. Werner Heisenberg, the famous German Physicist. We have seen in Shrödinger's model that there is a stormy region in the waves and to this region we assign the name, electron. Now, it has been found that the localisation of this electron is attended with no certainty. Well, if we want to predict where the next moment the electron will be, it suffices to know two things, its present position and momentum. But we see that we can fix the position with the probable error, say of $I / 1000$ of millimetre and the velocity with probable error, say of 1 kilometre per second. Then, if we reduce the error to, say I / 10000 of millimetre in ascertaining the position, scientists wonder to find that the probable error in the case of velocity has increased to 10 kilometres per second. That is to say, considering together, the probability of error remains the same. From this, Heisenberg puts forward his theory, the gist of which can be expressed thus: 'A particle may have position or it may have momentum, but it cannot, in any exact sense, have the both.' In this connection Prof. A. S. Eddington has observed, 'The conditions of our exploration of nature are such that, the more we bring to light the secret of position, the more the secret of velocity is hidden. They are like the old man and the old woman in the weather glass; as one comes out of one door, the other retires behind the other door.'* There are a lot of scientists who try to apply this to every phenomenon of this world of sense-perceptions. If an electron evades all sorts of exact

[^14]accuracy, why not all matters, which have so many electrons as their constituents, demonstrate the similar nature? These have led many physicists to suppose that there is no determinism in events in which atoms and electrons are singly involved and the apparent determinism on the large scale is only of a statistical nature. Eddington suggests, rather in a revolutionary way, that 'this Principle of Indeterminacy represents, like the Theory of Relativity, the abandonment of mistaken assumption,' and this mistaken assumption is no other than the principle of causality which states that whenever there is an effect, it must have been preceded by a cause. This school of scientists advocates the complete collapse of this principle of causality and, in their opinion, this, for which 'people had never sufficient reason for making' is already dethroned. It is not an indispensable requirement that an effect must have a cause preceding it and they believe, that the difference between the theoretical and the observed results is not due to the shortcomings of their instruments but to the fact that the things are as such. They attribute something like ' free will ' to a particle. As for instance, if there are three ways, say A, $B$ and $C$ which a certain particle may take up, with all the data in one's hand, one cannot predict beforehand with precision, what particular way of A, B and C it will take up. It can be said so far, A is the more probable way than $B$ and $B$ is the more probable way than C. It will be preposterous to say that this is the only assigned way to the particle, because it rests somewhat with the freak of the particle, which of the ways it will follow. In brief, in their considerations the rule of the cause-and-effect cycle, which from the oldest time has been supposed to hold the most powerful sway over this universe, has broken down.

But there has also been formed another shade of scientists of no mean repute headed by men like Max Planck, Albert Einstein and others who try to champion this law of causality and they have thrown much cold water on the speculations made by the former school of scientists, by calling their decisions 'unwarranted conclusion.' They do not really question the validity of the mathematics of Heisenberg's principle, what they question is the interpretation given to it. Planck goes so far as to call this concept of causality as something of transcendental character which is quite independent of the nature of the researcher and it will be valid if there were no perceiving subjects at all. ${ }^{1}$ To defend his point of view, Planck says that this question regarding the indeterminate behaviour of an electron 'is based upon

[^15]corpuscular mechanics where the initial state governs the cause of event for all time' but since an electron is not really a corpuscle, on the contrary, a system of waves, so the answer is to be sought for in wave mechanics in which 'such a question has no place, if only because the final result is on principle affected with a finite inaccuracy due to the principle of indeterminacy. ${ }^{1}$ Einstein lends his support to this in his statement that, ' I am entirely in agreement with our friend Planck in regard to the stand he has taken on the principle.' ${ }^{2}$

Whatever this controversy between the causality and the indeterminacy may lead us to, it is to be learnt that all our problems are to meet their solutions in these ultimate fragments of the material universe, that is, electrons and protons. A flood of light has, no doubt, been thrown upon this particular branch of science within less than three decades and yet more elucidation is expected with the refinements of our scientific adaptability. It was possibly Sir James Jeans who, in connection with reviewing our present scientific achievements, referred to Plato's well-known simile by saying that 'we are still imprisoned in our cave with our backs to light and can only watch the shadows on the wall,' and we think, it will not be too unjust of scientists to believe with Sir James in such a state of affairs. The future has the key in its womb which will unlock the realm of mystery and the frontiers of our knowledge will thus be extended.

[^16]
# Evidence of Life in the Indian Azoics: 

Gopal Chandra Chattopadhyay-Fourth Year, Science.

THE title seems to be a puzzle, but it is not so in reality. The earliest geological formations of India have been designated as Archæan, a period of time in the geologically ancient days when it is thought there was no " life" (i.e., living organism) on the face of this earth. My endeavour will be to show that there was " life" in India at a time which has been called in the geological history of the country as the Archæan Era. For my purpose I shall try to draw my evidences from the stratigraphy of India without reference to other parts of the world. Most of my inferences are based on the evidence of origin and mode of occurrence of a few of the most important mineral deposits of our country. I know not whether my ideas are correct and the proofs I will try to adduce are conclusive, but these views of origin occurred to me during my routine studies and they seem to be convincing to me.

Geological history in India has been divided into four great periods or 'eras' by Sir Thomas Holland, and the classification of rocks has been done according to that scheme:-
(1) Archæan-Represents the Archæozoic of Europe and America, i.e., Pre-Cambrian.
(2) Purana-Representing the period between the end of Archæozoic and the beginning of Cambrian. This division has been made solely on the basis of the evidence of effects of metamorphism of the rocks representing the period. Without any fossils, it is supposed to be without ' life.'
(3) Dravidian-Cambrian to Middle-Camb. of other parts of the world.
(4) Aryan-A period of time represented by Upper-Camb. to Holocene of other parts of the world.

[^17]The Archæans of India have again been sub-divided according to the following scheme:

Archæan $\left\{\begin{array}{l}\text { Proterozoic. } \\ \text { Archæozoic. }\end{array}\left\{\begin{array}{l}\text { Younger Archæozoic. } \\ \text { (Unconformity). } \\ \text { Older Archæozoic. }\end{array}\right.\right.$.
A great deal of difficulties stand in the way of deciphering the Geological history of the Archæan India. The prime among these difficulties is that we can get no help from fossil evidences, which, even if they were present, have been crushed and destroyed by the effects of metamorphism. We cannot at the same time correlate the different formations with great certainty about age, due to the reasons that old and acute metamorphism may make dissimilar rocks appear similar-a rock of para origin may appear to be of the origin, for example, of a Ortho-felspathic sandstone and a granite, and at the same time unequal metamorphism makes originally similar rocks appear quite dissimilar, for example, a clay may be metamorphosed to a slate in one place, and to a schist in another place where the metamorphism was greater. And being highly folded and faulted, the ordinary law of superposition cannot be applied to these rocks.

The rock formations of different parts of the country have, however, been correlated wherever possible, by noting the degree of metamorphism of the rocks and their lithological characters. And if we can prove the presence of evidences of life in one such formation, we can then assume with certainty that there was life present at other formations which have been definitely correlated with the former. To prove the presence of life we need not necessarily run after finding fossils only, but any effect produced by the presence and action of organic life would allow us to conclude that living organisms were present there. And I shall base my arguments on such evidences mainly.

The older Archæozoics (or Archæans) of India are definitely all of igneous origin, some of them are even held to be original consolidation products of the " nebular" matter from which the earth is supposed to have consolidated. Then comes the younger Archæozoics, called Dharwars, which are accepted to be metamorphosed sediments derived from the older Archæozoics with igneous intrusions, etc., at places. After this comes the Puranas which have been subdivided into: (1) Cuddapahs. (2) Vindhyans. These formations are also mostly of sedimentary origin. All the rock formations, up to the Cuddapahs in
time scale, are supposed to be " Azoic" in nature due to the lack of fossils (that is, organic impressions or remains) in them. But if we can succeed in establishing the prevalence of even 'bacteria' at any of these times from evidences of 'bacteria' action in any of these rock formations then the theory of the Archæan formations of India being "Azoic" finds no base to stand upon, because 'bacteria' are as much living organisms as any other plant or animal. And if we can succeed in establishing that there was life in the Dharwar times as well as in the Vindhyan times, for example, we can without the least hesitation assume that life was there in the intermediate formations even if we cannot produce any specific proof to that effect. It has already been said that the Dharwar formations, at least parts of it, are of sedimentary origin. It is easier to establish the occurrence of life at time which is represented by rocks of sedimentary origin than those represented by igneous origin. Because even if there was 'life' at a time and place where igneous activity took place, the living organisms become entirely consumed by the effect of heat and so no trace of them are left, and so it cannot be said whether there was any living organism present at a place any time when that place is made up of igneous rocks. As regards India, we do not know whether sufficient time evolved for the cooling of the first formed crust and the igneous intrusives and extrusives which constitute the older Archæans, and whether it remained cool for a sufficiently long time before another extensive igneous invasion for the appearance of 'life' on it, is not known and at the same time all the formations belonging to this period of time are igneous, so we could take it for granted that there was no life at that period.

The presence of such things as "graphite" and carbonaceous schist in comformable sequence within rock formations of sedimentary origin, suggests conclusively that there must have been life, either "plant or animal," at that period. The presence of plant life is suggested by the facts which we observe and which we know for certain to occur, that vegetable life breaks up the $\mathrm{CO}_{2}$ of the atmosphere and store up the carbon within themselves and after death they become changed into carbon itself by certain process into the details of which we need not enter. This carbon may occur as carbonaceous shales, etc., which may be changed by metamorphism into carbonaceous schists, or the decaying plants may give rise to such quantities of carbon that it may give rise to beds like coal, etc,, which, due to the effects of metamorphism, would change into graphite deposits. The graphite or carbonaceous rock may also be of animal origin, for, as Prof. Morley Davies observes in discussing the occurrence of graptolites,
" The skeleton of graptolite is composed of some organic material. When preserved in shales it is usually crushed flat, and appears as a thin film sometimes of whitish material, more often of graphite." This shows clearly that the carbonaceous matter may also be of animal origin. The presence of the mineral "glanconite" in sedimentary beds also proves marine conditions and presence of organism.

Now to come to our specific point, the existence of living organisms can be conclusively proved from the story of the origin of such a mineral as "Psilomelane," the manganese ore. The composition of a mineral species of igneous origin, or of chemical origin, is always constant. But this friend of ours, Psilomelane, has no such fixed composition, it varies a good deal in composition. It is a mixture of oxides of manganese with variable amounts of such other elements as $\mathrm{Ba}, \mathrm{K}$, etc., and with variable amounts of water. Different authorities suggest different composition for this mineral. Thus Partington gives the composition to be $(\mathrm{Mn}, \mathrm{Ba}) \mathrm{O}, 2 \mathrm{MnO}_{2}, \mathrm{nH}_{2} \mathrm{O}$; while Dana suggests that the composition may be something like $\mathrm{H}_{4} \mathrm{MnO}_{5}$ with $\mathrm{H}_{2} \mathrm{O}$ and some Ba or K in the molecule. About the origin, Partington says, that the deposits of hydrated oxides of Mn are sedimentary-precipitates, derived from oxidation by plant, etc. in lakes. Mellor also gives a view like that of Partington. About its observation Dana says, "A common but impure ore of Mn , frequently in alternating layers with pyrolusite." Hence we see how the composition of the mineral varies; so from this and its probable colloidal nature we can conclude, after Partington and other authorities, that the mineral has an origin analogous to the "bog iron ore" which is being deposited at the present day in Sweden, that is, by the action of bacteria in lakes from other manganiferous minerals.

The occurrence of Psilomelane with other manganese minerals of varied composition as huge ore bodies in the mansar stage of the Sauser series of the Dharwar age, as also the same type of ore (i.e., Gondite) deposits of the same age at several parts of India and their association suggests an origin like that indicated above. So we see that only from the origin and occurrence of the mineral Psilomelane we can clearly find out that there was life during Arcæan times in India. Even if there were no plants, as has been suggested by Partington, which help breaking up other such Mn minerals as Braunite, Pyrolusite, etc. in producing Psilomelane, there must have been bacterial life to produce this effect. As other evidences of life we can cite examples of the presence of graphite and carbonaceous schists in rocks of 'para' origin, and this would prove conclusively that there was life during Archæans. Thus we may show a number of examples of graphite deposits of
organic origin as well as carbonaceous schists to prove the presence of plant-life during the so-called Azoic times.

In the Tremadoe beds (Camb) of British Isles we find highly differentiated and branched forms of Didymograptus though we do not find any of their ancestors previous to them. Dr. Morley Davies remarks that they must have been developed from more primitive forms continuing from much earlier times. He has also suggested that when enclosed in shale beds, the bodies of these animals are frequently changed into graphite. But we cannot possibly draw a conclusion from this that the graphites occurring in India with the sedimentary Archæan beds are derived from the decay of these types of animals. Because we do not find any very good evidence of this type of animal even during the Vindhyan times. But we find the sediments of the Semri series and Kurwani series which are of Lower Vindhyan age and which consists of shales and limestones with some sandstones containing grains of glanconite, proving conclusively marine conditions and presence of animal organisms. We give here the examples of graphite deposits and carbonaceous schists of 'para' origin in the so-called "Azoic" formations of India: ( I ) Carbonaceous schists in the Saluala series and Jutogh series of Dharwar. (2) Garnet-graphite-Sillimanite-GranulitesBurma. (3) Graphite deposits of Khonaalite series of Orissa and East C. P. From this we can see that during the Dharwar times there must have been plant-life to give these carbonaceous deposits. And we have also proved the presence of bacteria, that is animal life.

Then curiously enough, though unfortunately for us, no evidence of fossils has yet been found from the Cuddapahs. But from the Vindhyan deposits we find distinct fossils. In the Suket shales (Kaimur) chitinous remains were found which were sent to America where they were first idenitified as acrothela (Brachiopod) remains, but later on it was noticed that they were only plant remains. Vitrain in pockets are also found from the Vindhyan deposits which also point to the presence of life. Recent work by the Geological Survey of India in the Vidhyan formations have revealed other fossil marks, and the investigators are trying to prove a Cambrian age for the Vindhyans. But that does not concern us for the present. So as we find evidence of life in the formations representing ages older and younger than the Cuddapahs we can conclude safely that life was also present during the Cuddapahs.

Also, already in the Cambrian formations of Burma and other parts of India, we find fossil Trilobites represented by a considerable variety of forms, showing that even then the group must have been of considerable antiquity, but at present no traces of the ancestors of the

Cambrian forms have been found. It is in the Cambrian system that we meet with the largest as well as the smallest Trilobites. From this also we may infer that they originated long before, but due to some mysterious reasons the earlier forms have been hidden from our view or entirely obliterared. We may, therefore, come to the conclusion that the three great formations of Indian stratigraphy which were so long held as 'Azoic,' really possessed living organism.

## OURSELVES

## COLLEGE UNION NOTES

## AUTUMN SOCIAL-

The Annual Autumn Social of the Union was celebrated on Sunday the 17 th September last, at the Calcutta University Institute Hall, the main item of the programme being the staging of Sarat Chandra's "Baikunther Will" and Parasuram's "Chnele Dhara," by the members of the Union. There was a distinguished gathering of ladies and gentlemen; Sj . Sarat Chatterjee also greeted the occasion with his kind presence. The function started at $6-30$ P.m. The College Orchestra under the able direction of Messrs. Bidyut Ghose and Archan Bose treated the audience to some beautiful strains and the play commenced. It was a grand success and the players acquitted themselves remarkably well. Messis. Robi Maitra, Nirmal Deb Rai, Suvas Mitra, Moni Ghose, and Robi Mazumdar executed their respective rolls very creditably. The songs beautifully sung by Messrs. Mrigen Sen, Moni Mukherjee, Amiya Mukherjea, and Anil Bhattacharyya gave life and fascination to the play. The other actors did their parts quite well. Our thanks are due to all who helped to make the function a success, and particularly to Professors C. C. Bhattacharyya and S. Bhaduri. The function owes its success also to the untiring zeal of the Joint Secretaries, Messrs. Hiren Bhanja and Nilratan Banerjee, as well as to the exemplary conduct of the volunteers who worked with an admirable esprit de corps under the joint captaincy of Messrs. Dwarkanath Chatterjee and Rajkumar Banerjee. It goes to the credit of the students that they realised a sum of Rs. 487/8/- as sale proceeds of the tickets. The amount has been duly handed over to Prof. N. K. Brahma, Secretary, Students' Aid Fund, through the Principal.

## FAREWELL GATHERING.

Before a distinguished gathering of colleagues, friends and pupils, Professor Nilmoni Chakravartty, Head of the Department of Sanskrit, was given a solemn farewell by the students of Presidency College, on the 29th November last, at the Physics Theatre. Principal B. M. Sen in presiding over the function spoke on the long and earnest service of Prof. Chakravarty for the improvement of the College. The latter, in reply, dwelt in a very touching manner on his connexions with the College, and exhorted his pupils to uphold the prestige of Presidency College. Some of the gentlemen present also spoke on the occasion. Our thanks are due to Messrs. N. Banerjee and Ajay Ray for making all arrangements for the function.

## MEMORIAL COMMITTEE.

A Committee, with the Principal as the president, has been formed to devise means for perpetuating the memory of our departed friend, Jitendranarayan Roy, who died this year after passing the I.Sc. Examina.
tion from this College. We hope the students will co-operate in the work of the Committee. We here note with gratitude the donation of Rs. $1,000 /$. made by the relatives of the departed for awarding a medal each year, out of the interest of the amount, to the student who stand first in the I.Sc. Examination from this College in memory of Jitendravarayan.

## STUDENTS' AID FUND.

To help the poor students of the College, a Students' Aid Fund has been started this year. The minimum monthly subscription has been fixed at one anna only which, we think, everyone of us can afford to pay. We expect that our students will support and maintain this noble institution.

We also note with pleasure that Mr. Dwarkanath Chatterjee, of the Fourth Year Class of our College, was selected to represent Calcutta University in the debate with the British Universities Team. Our congratulations to him as also to the other two members of our University team, Messrs. Sachindranath Das-Gupta and Sivaprasad Mitra, who were until very recently students of this College.

In conclusion, the Secretary has the pleasant duty to announce that the Bengali Literary Society and the Rabindra Parishad are doing their work splendidly. We draw the attention of all students to the celebrations in connection with Rammohun Roy centenary to be organised by the students of Bengal during the coming Christmas. We hope our students will take part in the celebrations to pay their respects to the great leader with whose inspiration and support this College was founded more than a century ago.

> Sukumar Chaudhuri, Secretary.

## ATHLETIC CLUB

## INDOOR GAMES.

The Indoor Games team of our College had a very successful and eventful season this year. In the recent All-Bengal Table-Tennis Team Championship tournament, our team, comprising Messrs. M. Das (Captain), A. Mukherji and A. M. Alahadad, triumphed over the very strong teams of the Moslem Institute, Y. M. C. A. College Branch, etc., which claim to have the best standard in the game, and went up to the final where it easily beat the Islamia College by two matches to one and thus annexed the Championship Cup. Ours was a narrow uphill journey but we overcame all our difficulties for which our players particularly A. Mookerji and M. Das deserve the sincerest thanks of the College.

In the individual All-Bengal Table-Tennis Championship tournament many of our fellow-students competed of whom A. Mukherji went ap to the final and M. Das up to the quarter-final. Mukherji surrendered to Md. Abdulla, the All-Bengal Champion in the final.

Then came the Inter-Collegiate Indoor Games Championship tournament, organised by the University Institute. Here, too, we were successfal.

Our Billiards team, represented by Kanak Ghosh and Gopal Mullick, was the most successful. The former was the champion and the latter the runner-up. In the Table-Tennis Tournament, our team met several strong teams of which the Scottish Church College team deserves special mention. Our College annexed the Table-Tennis Championship, here, too, beating the strong team of the University Law College in the final by three matches to one. M. Das showed great brilliance in beating S. Gupta in the semi-final. Our Carrom team, too, fared well. It beat a few strong teams and went up to the final where it went down to the strong team of the Medical College. The Indoor Games team thus winning the championship in Billiards and Table-Tennis and being the runners-up in Billiards and Carrom, annexed the Inter-Collegiate Indoor Games Challenge Cup to its many other trophies.

Among ourselves, we had our annual Table-Tennis tournament in which Ashit Mukherji beat M. Das in the final and won the College Championship Cup. The function which was organised on this occasion was well attended by professors and fellow-students. Principal B. M. Sen took the chair. Mrs. Sen encouraged us with her kind presence and gave away the prizes.

No report would be complete without giving thanks to the players of our team, but for whose untiring and sincere efforts our brilliant success would have been an unrealised vision. We also take this opportunity of expressing our hearty thanks to Prof. K. N. Chakravarty for his kind help and active assistance. Our kind Principal deserves our grateful thanks for having taken so keen an interest in the improvement of the games.

Manoranjan Das,<br>Secretary.

## ECONOMICS SEMINAR

At the fifth meeting which was held on the 3rd September last under the presidency of Dr. J. C. Sinha, Mr. Romesh Bhattacharyya read a paper on "The Financial System of the Federated India." At the outset he attempted to point out what the problem is. All the provinces, he said, are not equally developed for reasons which are not only political and economical but circumstantial too. In allocating adequate resources to the provinces, the guiding principle therefore ought to be "from each according to his capacity, to each according to his needs." After briefly reviewing the past financial bistory of British India, the writer then examined in detail the proposals of the Percy Committee and the White Paper. While dwelling on the allocation of resources, he said that income-tax cannot be provincialised for income itself cannot be provincialised. But the Central authority cannot for that reason keep the whole of the yield. Regarding the best way of distributing this head of the revenue, he preferred the scheme based on residence. With respect to the taxes on jute, rice and minerals, he desired that they ought to have been provincial heads. An export duty on rice and jute is generally a tax on the provinces and is analogous to Land Revenue. As such this ought to go to the provinces. Minerals are like capital goods. With their exportation the country is being exhausted of the wealth for ever.

Taxes on them can therefore in no case be a Central head. After examining other sides of the proposed scheme of Federal Finance, the writer concluded with the remark that " on the whole the proposals of the White Paper have removed the wrongs and injustice done by the Meston Settlement and though still certain provinces have grievances, yet the allocation of revenues and resources is just and sound in practice."

Mr. Bhabatosh Chakrabarti contended that although practically diffcult, the distribution of the proceeds of the Income Tax to different provinces should be, as far as possible, on the basis of origin. According to him the basis of residence adopted by the writer (also this was the Percy Committee's view ) really aimed at the basis of origin. According to him the contributions of the provinces to the Central Government should not be simply in proportion to the provinces' share in the IncomeTax as Percy Committee (after the Meston Committee) has suggested, but the expenditures of the provinces should also be taken into consideration. In short, his contention was that contributions should not be proportional to income only but proportional to economical capacity. With vote of thanks to the chair the meeting was dissolved.

The session is coming to a close and with it the Secretary's term of office. He bids adieu to his revered professors and loving friends. He takes this opportunity of expressing his gratitude to them. He is very grateful to Professors Sinha and Sircar and he is much obliged to his Fourth Year friends for their kind co-operation in making the meetings successful.

> Sadhan Sen,
> Secretary.

## POLITICAL SEMINAR

The second meeting of the above Seminar was held on Saturday, the 19th August, 1933, at 2 p.m. in the Seminar Room with Professor D. G. Chattaraj in the chair. Sj. Bhabatosh Chakrabarty of the 4th Year Class read a paper on "The Pluralistic Theory and the Discredit of the Modern State." "A man," he said " is a complex of diverse tastes and tendencies" and he is a member of different associations to which he owes his duty and allegiance. These associations have different aims and organisations. Pluralism means that the State should part with some of its powers which will devolve upon these associations. The State is, however, sovereign over all other Associations within the State. He then pointed out the limitations of the monistic theory of the State and went on to discuss the constructive programme of the Pluralistic Theory from different political view-points. As regards the representation of the electorate in the Assembly he said that the people should be divided into groups according to their respective interests and that functional voting should be introduced. Women suffrage should come in as they form a separate class and have functions divergent in many matters from that of the men. Law, according to the speaker, should co-ordinate the different interests. In the discussion that followed many participated. In summing up the President after congratulating the reader on his excellent paper pointed out that he did not speak anything about the Executive nor did he make any mention about the relation of the Pluralistic State
with other foreign States which would have made the paper complete. The meeting ended with a vote of thanks to the Chair.

Professor U: N. Ghosal, m.A., ph.D., presided over the third meeting of the Seminar which came off on Tuesday, the $7^{\text {th }}$ November, 1933. Dr. Heinz Nitzschke, a Deutsche Akademie Scholar was invited to speak on "New Germany." After an excellent historical retrospect of the Nazi movement, the speaker discussed a few outstanding problems of modern Germany. "Germany," he said, " is the only country in Europe which had to face the Jew problem." He then described how the Jews came into Germany during the war and amassed enormous wealth, how they were gradually monopolising all the important services and professions in the State and how they were exploiting Germany and the Germans. Regarding the democratic movement in Germany, the speaker said that it was "democracy of leadership" and triat Hitler was the representative of the people. The meeting ended with a vote of thanks to the Chair and to the speaker.

The Secretary takes this opportunity to offer his thanks to Professor Chattaraj for his kind interest and friendly participation in the work of the Seminar, to Dr. Ghosal for presiding over the deliberations of the Seminar and to the student-helpers whose active help and co-operation in the work of the Seminar are making the meetings a ientre of imtelectach fellowship.

Sailendra Kumar Lahirt,
Secretary.

## HISTORICAL SEMINAR

A special meeting of the above Seminar came off on the 5 th September last, at the Physics Theatre with Principal B. M. Sen in the chair. Dr. Kalidas Nag delivered an interesting lecture on "The Migration of Ancient Indian Culture," with the help of numerous lantern slides. The lecture was both instructive and interesting, and was. appreciated by all. Dr. U. N. Ghosal proposed the vote of thanks to the Chair.

The fifth meeting was held on the rith Novemper last, with Prof. D. N. Sen in the chair. Mr. Dwarakanath Chatterjee of the Foutrh Year Honours Class read an interesting paper on "Catholicism vs. Protestantism." The writer took an extreme Catholic standpoint and attempted to prove the futility of the Reformation. Next followed a very keen and lively debate in which Messrs. Radhikamohan Sanyal, Jyotirmoy Banerjee, Sushilkumar Guha, Rathindranarayan Ghose and Nabinchandra Goswami took part. Prof. Susobhan Chandra Sarkar then explained the subject-matter of the paper in a very lucid way. The President also spoke on the subject.

At the sixth meeting, convened on ryth November last, Prof. D. N. Sen presided, and Mr. Sushil Kumar Guha of the Fourth Year Honours Class read a paper on "Gupta Age-the Golden Age of India." After pointing out that it was an age of Brahmanical renaissance, the writer compared it with the Periclean Age of Greece. In the debate that ensued, Messrs. Dwarakanath Chatterjee, Jyotirmoy Banerjee, Rathindra-
narayan Ghose and Nabinchandra Goswami spoke. Dr. U. N. Ghosal made clear the controversial points. After the President having spoken, the meeting was brought to a close.

The second special meeting of the Seminar was held on 25th November last, at the Physics Theatre, with Principal B. M. Sen in the chair. Dr. Kalidas Nag delivered a lecture on "The Migration of Ancient Indian Culture by Sea." It was a continuation of his previous lecture, but this time the maritime enterprise of the ancient Indians was fully described-an enterprise which was responsible for the plantation of our civilisation in distant places like Ceylon, Burma, Sumatra, Java, Borneo and other places. Mr. Dwarakanath Chatterjee proposed a vote of thanks to the chair and the speaker, with which the meeting was terminated.

Dilip Sen Gupta,
Secretary.

## PHILOSOPHY SEMINAR

The tenth meeting of the Seminar was held on Saturday, the 9th September, 1933, at 2 p.m., with Dr. N. K. Brahma, M.A., Ph.d., p.r.s., in the chair. Syed Muhammad Ali of the Fourth Year Honours Class read his paper on 'Freedom and Necessity.' The writer began his essay by explaining the terms 'Freedom' and 'Necessity' and showed that without the postulate of freedom, question of morality cannot arise. The writer concluded by stating that although the two terms are contradictory in their extreme senses, yet human beings are partially free and are partially bound up in the chain of necessity. The President remarked that although all the questions concerning the problem were not fully discussed, yet from the point of view of an essay, the paper was a good one. With the usual observations from the chair, the meeting came to an end.

The eleventh meeting was held on Saturday, the rith November, at 2 p.m. Mr. Serajul Islam of the Fourth Year Honours Class read his paper on "The Development of Idealism from Locke to Hume." Dr. N. K. Brahma was in the chair. The writer dwelt mainly on the following points-(a) The difference between Modern idealism and Platonic idealism; (b) Locke's distinction between Primary and Secondary qualities; (c) Berkeley's denial of any such distinction and (d) Hume's Phenomenalistic idealism. The President, then, explaining the subject very clearly brought the meeting to a close.

The next meeting was held on 25 th November, at 2 p. M. Syed S. A. Masud read his paper on "Optimism and Pessimism." Dr. N. K. Brahma took the chair. The writer explaining optimism and pessimism first, discussed the different forms of pessimism, and showing the inadequacies of this theory as contrasted with the merits of optimism remarked that the latter was for the chosen fortunate few. In the debate that followed, almost all the students present took part. The President, then, with a long speech on the subject, observed that although the paper was a good piece of literature, yet, strictly speaking, it was rather not meant to be a philosophical one.

## HINDI LITERARY SOCIETY

The first ordinary meeting of the society was held on Friday, the rith August, 1933. Prof. S. N. Lala presided. The following officebearers for the session 1933-34 were unanimously elected:

Patron-Principal B. M. Sen.
President-Prof. S. N. Liala.
Vice-Pyesident-Prof. H. K. Banerjee.
Secretary-Mr. Surajmal Daga (Third Year Arts).
Asst. Secretary-Mr. Mohanlal Baid (First Year Arts).
The second ordinary meeting of the Society was held on Saturday, the 12th August, 1933, with Prof. S. N. Lala in the chair. Mr. Binayak Prasad Himatsinghka of the Fourth Year Arts Class submitted a lengthy paper on the great poet "Soordas" but due to shortness of time, promised to read it at the next meeting.

A condolence meeting of the members of the Society took place on Monday, the 14th August, 1933, with Prof. S. N. Lala in the chair, to express sorrow at the sad and untimely demise of the wife of Mr. Shyama Prasad Mookerjee. A resolution was passed to that effect and a copy of it was forwarded to Mr. Mookerjee.

The third ordinary meeting of the Society came off on Friday, the 25 th August, 1933, under the presidency of Prof. S. N. Lala. Mr. B. P. Himatsinghka being absent, his paper on the great poet "Soordas" could not be read. It was decided to arrange a trip to the Botanical Gardens. Accordingly, the members went on a picnic on Sunday, the 3rd September, 1933, with Prof. S. N. Lala. It proved to be a very pleasant excursion.

The fourth ordinary meeting of the Society was held on Thursday, the 23 rd November, 1933, to consider the question of holding an annual function but due to the absence of the President Prof. S. N. Lala, no decision could be arrived at and the meeting had to be postponed.

Surajmal Daga,
Secretary.

## SCIENCE ASSOCIATION

The new session of the Science Association began with certain changes in the personnel of the office-bearers. Dr. S. Dutt has been chosen the Vice-president, our Principal remaining the ex-officio President. Prof. C. C. Bhattacharjee continues in the office of the treasurer. Mr. Santosh Chandra Mukherjee has succeeded Mr. Ajit Kumar Majumdar as Secretary.

As to the activities of the Association it may be noted that it arranged for four lectures and two excursions.

The first lecture was delivered about the middle of July by Prof. S. C. Mohalanobis on "Body and its Foes," with our President in the chair. The keen insight with which the learned speaker handled the problem was admirable. On the 22nd of August an excursion was arranged for to the Light-foot Refrigeration Company to see the manufacturing processes of liquid air and ice. A large number of members accompanied by Professors S. Dutt, A. Maitra, N. Chakrabortty and N. Neogi joined.

The Company gave a kind reception to us all for which the Secretary remains thankful to them. The second lecture was delivered on the 26th of August by Dr. M. M. Chatterjee on "Geological Chronometers," Prof. N. C. Bhattacharjee occupying the chair. Instructive slides were used to make the lecture interesting to everyone present.

The third lecture was delivered by Dr. H. K. Sen on the "Study of Chemistry and its Applications," under the chairmanship of our Principal. Dr. Sen explained in a very brilliant way the increasing utilities and rapid progress of Science. Among many other points touched upon he specially mentioned the industrial application of coal, and how the energy that is entrapped in the plant region may be utilised as fuel when coal will be exhausted and how the bye-products obtained therefrom and water-hyacinth and waste products which are thrown on the 'Dhapar Math ' every day may be utilised as building materials, etc. The meeting terminated with a vote of thanks to the Chair and the lecturer by Dr. P. Neogi.

The fourth lecture was delivered on the 18 th of November by Dr. S. N. Sen, Meteorologist, an old student of this College on the "Metearological Aspects of Rains of Fishes," with our President in the Chair. He surveyed his recent investigations of fish-rain at Muzaffarpur briefly and said that it is due to the water-spouts which carry the fishes up and let them fall down with rain. Dr. Hora of the Zoological Survey of India then gave a brief survey of the reports of rains of fishes from different parts of the world and discussing the various explanations given to the phenomenon supported Dr. Sen's view, concluding that the fish-rains are due to water-spouts only. The second excursion arranged for was to the Broadcasting Station at Cossipore, on the 22nd of November. About 50 members accompanied by Messrs. Kshirod Chandra Mazumdar, and Mohini Mohan Ghosh. Profs. N. Neogi, N. Chakravarty and S. Mukherjee joined. The Engineer in charge there gave a kind reception to all and explained everything to those present.

Santosh Chandra Murherjee, Secretary.

## CHEMICAL SOCIETY

The annual general meeting of the above Society was held on the and December, 1933, with Prof. P. Neogi in the chair. The following items in the agenda were gone through.

A resolution was passed unanimously, all standing, to forward a letter of condolence to the bereaved family of late Mr. Md. Ishaque, a former post-graduate Chemistry student of this College.

The following office-bearers for the session 1933-34 were then elected:
President-Prof. P. Neogi, m.sc., ph.D., P.R.S., I.E.s.
Vice-Presidents-
Prof. Q. Khuda, m.sc., d.sc., d.I.c., p.r.s.
Prof. A. C. Sircar, m.Sc., ph.D., p.r.s.
Prof. A. Maitra, m.a.

Hony. Treasurer-Prof. N. G. Chakravarty, m.sc.

Representative from the teaching staff-
Prof. H. D. Mukherjee, m.sc.
Secretary-Mr. Kirtish Ray, b.sc.
Asst. Secretary-Mr. Tripura Charan Sircar.
Class representatives-
VI Year-Mr. Balai Chandra Sen Gupta, b.sc.
V Year-Mr. Hirendranath Gupta, b.sc.
IV Year-Mr. Nripendra Lall Lahiri.
III Year-Mr. Debesh Chandra Bhattacharjee.
The above gentlemen will constitute the executive committ........ Society for the coming year.

The Society organised an excursion on 25th November to the Palta Water Works which was availed of by over two hundred Chemistry students of the College. The party was accompanied by Dr. P. Neogi, Dr. Q. Khuda, Dr. A. C. Sircar, Prof. H. D. Mukherjea, Prof. G. G. Basak, Prof. N. G. Chakravarty and Prof. M. A. Hossain.

Kirtish Ray, Secretary.

## GEOLOGICAL INSTITUTE

## PROCEEDINGS OF 28 TH ANNUAL GENERAL MEETING

The meeting was held on Saturday the r9th August, 1933, at ${ }^{2-30}$ P.м. in the Geology Lecture Theatre of the College, under the presidency of Prof. B. N. Maitra, m.sc., b.L., the Vice-President. Attendance was quite good and besides the members, a large number of exstudents of the Department and some guests were present. Prominent among them were Principal and Mrs. B. M. Sen, Prof. and Mrs. M. Chatterjee, Dr. M. S. Krishnan and Profs. D. N. Sen, S. C. Sarkar, S. L. Biswas, K. K. Sen Gupta, N. N. Chatterjee and others. Principal and Mrs. Sen left the meeting early on account of some important engagement. The Annual Report and accounts for the Session, 1932-33 were read and adopted. The President in commenting on the Annual Report drew the attention of all present to the comparative statement of activities of the Institute for the last 20 years and said that the work during the session had been most satisfactory and the financial position also was quite encouraging. He urged all present to take interest in all affairs of the Institute and to try at least to maintain the standard attained during the session. Principal Sen, in the course of his remarks on the activities of the Institute, said that though the subject of Geology deals with lifeless stones the Institute is a lively one which keeps it going. He congratulated the Secretary and the Institute for the good account they had given of themselves by their work. Then the distribution of the " Geological Institute Medals" for 1932-33 took place and Mrs. Sen gave away the medals. The President then declared the names of the class representatives for the
session, 1933-34. The Second Year Geography Class was unrepresented and none could even be elected at the meeting as no member of the class was present in the meeting. The representatives are:-Sixth Year: Mr. A. Mukherjee, b.sc., Fifth Year: Mr. G. C. Chatterji, b.sc., Fifth Year: Mr. P. K. Chatterji, b.sc., Fourth Year: Mr. H. N. Ganguli, Fourth Year:Mr. T. C. Sarkar, Third Year: Mr. S. C. Roy Chowdhury, Third Year: T. C. Roy, First Year: Mr. Amiya Kumar Guha, First Year: Mr. Deb Kumar Chakravarty. Mr. Santi Mukherji was then elected as the representative of the Associate Members, who are ex-students of Geology or Geography department of the College. The election of office-bearers then took place and the following were unanimously elected:-

President-Prof. W. D. West, m.A. (Cantab.).<br>Vice-President--Prof. M. Chatterjee, b.sc., Ph.D. (Lond.), D.I.c., A.R.C.S.<br>Treasurer-Mr. P. C. Dutt, m.sc., b.L.<br>Secretary-Mr. G. C. Chatterji.<br>Asst. Secretary-Mr. H. N. Ganguli.

Prof. Maitra then delivered his presidential address on "How Life Responds to some Geological and Geographical Factors." The address was very interesting and gave a lot of useful information and lasted for more than an hour. The full text of the address appeared in the last issue of the Magazine. Dr. Chatterjee, the newly elected Vice-President then thanked Prof. Maitra for his interesting address. The Secretary also thanked all those connected with the Institute for their kind co-operation and enthusiasm with which they helped him in the discharge of his duty. The meeting terminated with a vote of thanks to the chair. Tea and light refreshments were served to all present. A conversazione was also arranged at the suggestion of Dr. Chatterjee, and a large number of very interesting specimens of rocks, minerals and fossils were exhibited by members,-both professors and students.

## SUMMARY OF THE ANNUAL REPORT

In presenting the report of the working of the Institute during the session, 1932-33, we notice with satisfaction that the Institute has made a considerable progress in every direction, and has increased its popularity amongst lovers of geological studies in particular, and science in general. At the outset we must congratulate ourselves that we had the good fortune of having Prof. West as the President of the Institute. The amount of success that has been achieved in bringing the Institute back into a new life from its swooning condition is essentially due to his ungrudging and unflinching help. Our new Professor, Dr. M. Chatterjee, has also been taking a keen interest in all affairs of the Institute. Our respectful thanks to him. The Institute is fortunate in having for the first time a Life Member in the person of Prof. W. D. West, m.a. (Cantab.)

Obituary: During the year we had to mourn the loss of Prof. Hem Chandra Das Gupta, m.A., F.G.S., the founder, past-president, and patron of the Institute. He passed off on the New Year's Day of this year. He founded the Institute in Igo5, and since then had been its guiding
star. He was a student here and took his M.A. degree from this College. He joined this College early this century as a junior member of the staff and with his vast erudition and unflinching faithfulness to his duty, rose to be the Head of the Department of Geology. He was raised to the status of an University Professor in the subject in charge of the department under the Calcutta University. He was a Fellow of the Calcutta University and the Chairman of its Board of Studies in Geology and Mineralogy and as such made a considerable progress in raising the standard of Geological Studies under the University. He was connected with other institutions and we think it needless to depict all these as they are so patent to all who are connected with Geology in India.

Strength: The numerical strength of the Institute for the session under review is as follows-Life Member 1; Ordinary Members 52; Associate Members 8; total 6r.

Patrons: We record with pleasure that the following gentlemen kindly consented to be Patrons of the Institute and were duly elected:д. Mr. B. M. Sen, m.a. (Cantab.), m.sc. (Cal.), t.e.s., Principal, Presidency College. 2. Dr. L. L. Fermor, o.b.e., d.Sc., etc., Director, Geological Survey of India. 3. Mr. H: C. Das Gupta, m.a. (Cal.), f.g.s. (since deceased), Professor of Geology, Presidency College.

Executive Committee: The committee held 7 ordinary, 2 adjourned, and 3 emergent meetings during the session. In this session for the first time one representative of the associate members who are ex-students of the Department of Geology of the College has been taken into the committee.

General Meetings: Altogether io meetings were held of which 6 were ordinary and 4 special general meetings. During the session under review the Institute had the honour of receiving eminent persons like Prof. Sir C. V. Raman, Dr. Fermor, Monsieur P. C. Visser (Consul-General for the Netherlands in India) and others, and hear them speak to us on different subjects of scientific and general interest.

Annual General Meeting: The 27th Annual General Meeting was held on Friday, the 5th August, 1932, at 4 P.m. in the Geological Lecture Theatre of the Coilege under the presidency of Dr. M. S. Krishnan, m.a., ph.D. The following items of business were gone through:-I. The annual report and accounts for 1931-32 submitted by the retiring Secretary were adopted unanimously. 2. The names of the class representatives to the Executive Committee, as elected by the respective classes, were declared. 2. The election of the Office-bearers for the session 1932-33 took place. 4. Dr. Krishnan then delivered his presidential address on "Recent Trends In Non-Metallic Mineral Industries." 5. Speeches by others present and thanks-giving. 6. Tea and light refreshments.

Social Functions: Anniversary Meeting-The 27th Anniversary Meeting of the Institute was celebrated on Saturday, the 3rd December, 1932, at the Geological Lecture Theatre. A very decent programme was gone through. The function opened with the enchanting melody of our national anthem 'Bande Mataram,' followed by speeches of President West, Dr. Fermor, Principal Sen and Dr. Chatterjee. Then all present were entertained by a play on 'Sitar.' Members and guests were then served with afternoon tea by the Imperial Restaurant, at the Science Library. The last item on the days' programme was a show of the film
'Cosmic Drama,' followed by an after-piece, by Messrs. Madan Theatres, Ltd. A group photograph of the Institute, with the Patrons, and another at the tea-table including the guests and members were taken. Send-off to Prof. West: A social evening was organised on the igth April, r933, to meet Prof. West, our President on the eve of his departure for home on long leave. A large number of members attended. A decorated casket and an ivory cigarette-holder were presented to him on the occasion. The gentlemen present were served with light refreshments. The expenses were met by private contributions.

Institute Silver Medil: After a period of more than 15 years the Silver Medal competition has been held again. Six papers were received for the competition and the judges after going through them recommended the award of two medals for the following papers:-I. 'Evidence of Life in the Indian Azoics '-by Gopal Chandra Chattopadhyay (4th Year), (appeared elsewhere in this issue of the Magazine). 2. 'An Essay on the Wonders in the Formation of India, as revealed by the Geologists' -by C. B. T. Naidu (4th Year).

Excursions: Two Excursions were organised by the Institute for its members: r. Excursion to Alipore Meteorological Observatory on the 17th December, 1932. It was attended by 25 members and guests accompanied by Prof. West. They were shown round by the Meteorologist-incharge and the workings of the various instruments were explained to them. We tender our thanks to Dr. S. Sen for the facilities given. 2. Excursion to the Oriental Glass Works, on the 18th February, 1933. About 20 members joined. The preparation of various glass articles were demonstrated to the party. Our thanks are due to the managements for their courtesy and for providing light refreshments which was much appreciated. Thanks are also due for the presentation of some of the products of the Factory to the members. Excursion with Prof. West: Another unofficial Excursion which we think it our duty to record here, although technically it is not one belonging to the Institute, is the one organised by our President. During the Puja vacation of 1932, Prof. West, our President, took out a party of our members belonging to the Fourth Year Honours Class for an Excursion to the Central Provinces. The party consisted of 12 members including the President and the Secretary. The entire cost of the Excursion, nearly a thousand rupees, was met by Prof. West.

Finances: The financial condition of the Institute has been quite satisfactory during the session under review. The total receipts from various sources amounted to Rs. $399 / 5 /-$, as against Rs. $40 / 15 / 6$ in 1931-32, and the total expenses to Rs. 371/6/-, as against Rs. $40 / 10 / 6$ in 1931-32, leaving a balance of Rs. $27 / 15 /-$, as against Rs. $-/ 5 /$ - in 1931-32, to be carried forward to next session's credit.

Das Gupta Memorial Committee: At the 3rd Special General Meeting held on 4th February, 1933, a committee was appointed to devise ways and means to perpetuate the memory of the late Prof. Das Gupta.

Ackowledgment: We offer our respectful thanks to Principal Sen for the kind and sympathetic help that he has always extended towards all activities of the Institute. We also thank Prof. P. C. Mahalanobis for kindly allowing the Institute to hold several meetings in the Physics Theatre and Prof. N. C. Bhattacharjee for his kind permission to use

## OURSELVES

the Epidioscope belonging to the Physiology Department. Thanks are due to the Editors of the leading Newspapers of Calcutta for publishing Notices and Reports of the Institute and to the Editor, Presidency College Magazine for publishing reports as well as for presenting 8 copies of the September, 1932, issue of the Magazine to the Institute. We are grateful to the Management of Messrs. Madan Theatres, Ltd., for giving a free Show of several Films to the Institute on the occasion of the last Anniversary Meeting. Our hearty thanks go to Messrs. Temple Press of 2, Lyons Range, Calcutta, for the services they have rendered in charging us low rates. In conclusion we take this opportunity of extending our sincere thanks to all who have taken especial interest in the work of the Institute and have helped to make the session a success.

## GENERAL MEETINGS DURING THE SESSION.

27-8-32. Paper on "Conceptions of Geology and a Study of the Indian Plains and Mountains" by Mr. J. Banerjee of the Fourth Year Class. Consideration of the draft of new rules passed by the Executive Committee. The rules were decided to be circulated among the members and the suggestions proposed, if any, by them to be discussed in another General Meeting.

3-9-32 (Special). Popular Lecture (illustrated by slides) on "Glaciers " by Mr. J. B. Auden, m.A., of the Geological Survey of India.

16-9-32. Election of Patrons: Election of Associate Members: Paper on "Fossils, the recorder of the history of that living creation of which we form a part" by Mr. K. P. Chatterjee of Fourth Year Class. Discussion of the proposed modification of the rules, as suggested by members and their adoption after consideration.

23-9-32. An illustrated lecture on " $A$ Tertiary Geo-Syncline in N. W. Punjab and the History of the Late Quarternary Earth Movements, in the Gangetic Plain," by Mr. D. N. Wadia, M.A., b.sc., f.g.s., of the Geological Survey of India.

26-9-32 (Special). Popular Lecture (illustrated by slides) on " RadioActivity" by Prof. Sir C. V. Raman, Kt., D.sc., Ph.D., F.r.S., Nobel Laureate.

4-2-33 (Special). Condolence meeting on the death of Prof. Das Gupta.
4-2-33. Election of Associate Members: Declaration of names of members of the Standing Committee of Judges: Declaration of the name of Life Member. A paper on 'Igneous Rocks' by Mr. P K. Chatterjee of Fourth Year Class.

2-3-33 (Special). Popular Lecture (illustrated by slides) on "The Third Netherlands Expedition to the High Mountains of the Karakoram" -by Mons. P. C. Visser, Consul-General for Netherlands in India.
xI-3-33. Election of Associate Members: Paper on: (i) "Earthquakes" (in Bengali) by S. K. Chakravarty of 4th Year Class. (ii) "Corals-the charm of the Tropical Seas"-by H. N. Ganguli of 3rd Year Class. (iii) "Evidence of Life in the Indian Azoics"-by G. C. Chatterji of 4th Year Class.

14-8-33. Declaration of names of recipients of Institute Medals. A paper on 'Mica'-by A. Mookherjee of 6th Year Class.
G. C. Chatterji, Hony. Secretary.
H. N. Ganguli, Hony. Asst. Secretary.

## REPORT OF THE NEW SESSION

The First Ordinary General Meeting of the Institute was held on the 3oth of August, 1933, at 4-I5 P.M., under the presidency of Dr. M. Chatterjee, bsc. (Cal.), ph.d. (Lond.), d.I.c., a.r.c.s. Thirteen Associate Members were elected. Mr. Austin Manindra Nath Ghose, a newly elected member of the Institute, then delivered a very interesting lecture on 'Cretaceous Dinosaurs of Central India.' The lecture was profusely illustrated with charts and lantern slides. During the course of his lecture, Mr. Ghose dealt in a masterly manner on the origin, growth and decay of the masters of the earth during the Mesozoic Era. After the lecture an interesting discussion took place in which Dr. T. P. Das Gupta, Dr. Chatterjee and others took part.

The Second Ordinary General Meeting of the Session was called on the 17th November, 1933, at 4 P.M. with Mr. W. D. West, M.A. (Cantab.), in the Chair. The officiating Secretary read out a letter of resignation from Mr. G. C. Chatterji, the Hony. Secretary on his being absent for study at the Indian School of Mines. The President then proposed a vote of thanks to the retiring Secretary for the keen interest and personal care and attention with which he guided the affairs of the Institute. He also mentioned that it was only through his untiring energy that the Institute was brought to its present status. Then Mr. Hirendra Nath Ganguli, the officiating Secretary was duly proposed and elected unanimously the Hony. Secretary of the Institute for the rest of the session. Mr. Sushil Chowdhury was duly proposed and elected unanimously as the Assistant Secretary of the Institute. Afterwards Prof. Susobhan Chandra Sarkar, m.A. (Cal. and Oxon), was elected as one of the Vice-Presidents of the Institute under a new amendment to the rules. Dr. M. S. Krishnan, m.s., ph.D., then delivered an interesting lecture on "Volcanoes." He dwelt briefly on the different phases of volcanic action including the quiescent boiling pools of basic lava, the more violent types, where lava flows alternate with explosions, the extremely violent type when only violent explosions attended by ejection of fragmented materials result, and lastly, eruptions which give out enormous volumes of liquid lava. In conclusion he showed the distribution of the present day and the recently extinct volcanoes and their connection with the recently folded chains of mountains especially round the Pacific Ocean. The lecture was illustrated with a large number of lantern slides.

The First Special General Meeting was held on Monday the irth September, 1933, at $4-30 \mathrm{p} . \mathrm{m}$. in the Geological lecture theatre of the College with Dr. Chatterjee, Ph.d. (Lond.), in the chair. Dr. Cyril S. Fox, D.sc. (B'ham.), Superintendent, Geological Survey of India, delivered an interesting popular lecture on the evolution of 'Bay of Bengal.' The lecturer during the course of the lecture traced the gradual development of the Bay of Bengal from early Tertiary times. The different forms of the Sea at various geological times in the course of its evolution, were illustrated by projections on the screen. Certain original experiments to support the views and theories of the lecturer were performed.

An excursion to the Tallah Pumping Station of the Calcutta Corporation was arranged for and took place on Saturday, the 17 th September. The party consisted of 20 members with Dr. Monomohan Chatterjee.

During the period under review seven meetings of the Executive Committee were held, all in connection with the internal working of the Institute.

INSTITUTE MEDAL : It has been decided to award a silver medal called " Geological Institute Silver Medal" to the best writer of an essay on any Geological or Geographical subject. Any subject may be chosen and it is made known that standards, which may be expected from the students of the respective classes, will be considered. The competition is open to the students of Geology and Geography of our College. Essays are invited from them and those received up to the last date of February, 1934, will be eligible for the competition. These are to be sent to either of the undersigned.

Hirendranath Ganguli<br>Hony. Secretary.<br>Sushil Chowdhury<br>Hony. Asst. Secretary.

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| 57. | Fisher, R. A. | Statistical Methods for Research Workers | 515.035 (a) |
| 58. | Frenkel, J. | Lehrbuch der Elektro-dynamik. Vols. 1, 2 | $517 \cdot 6036$ (D) |
| 59. | Frenkel, J. | Wave Mechanics ... | 530.058 |
| 60. | Galsworthy, J, | Maid in Waiting ... ${ }^{\text {a }}$ | $740 \cdot 1585$ (A) |
| 61. | Gans, R. | Vector Analysis, with Applications to Physics ... ... ... .. | 516.5018 |
| 62. | Gissing, $G$. | Veranilda ... | 740-1653 |
| 63. | Gissing, G. | Will Warburton a | $740 \cdot 1654$ |
| 64. | Glasstone, S. | Electro-chemistry of Solutions | $543 \cdot 202$ |
| 65. | Gooch, G. P. | Studies in Modern History | $970 \cdot 371$ |
| 66. | [Grain] | Report of the Commission to enquire into Trading in Grain Futures | 033.865(B) |
| 67. | Gray and Collins | Poetical Works | $721 \cdot 39(7 a)$ |
| 68. | Grimsehl, E. | Text-book of Physics, Vol. I: Mechanics | $532 \cdot 133$ |
| 69. | Grotrian, $\mathbf{W}$. | Graphische Darstellung der Spektren Von Atomen und Ionen mit ein, Zwei und drei Valenzelektronen, Parts 1 \& 2 | 53 |
| 70. | Hardy, G. H. | Pure Mathematics | 510.2054 |
| 71. | Hashimi, Nasiruddin | Europe min Dakhani min Makhtulat | $851 \cdot \mathrm{eu}(1)$ |
| 72. | Hatch, H. | Outdoor Geography | 551.128 |
| 73. | Hawthorne, N. | The Scarlet Letter | 740.1891 |
| 74. | Heaton, E. W. | Senior Scientific Geography | 980.0374 |
| 75. | Heekstall-Smith, H. W. | tntermediate Electrical Theory, 2 Vols. | $537 \cdot 10533$ |
| 76. | Herrick, M. T. | The Poetics of Aristotle in England | $180 \cdot 0105$ |
| 77. | Hiorns \& Mille. | Map Reading ... | 981.094 |
| 78. | [History] | European History. Reddaway (W. F.) Editor. Select Documents of European History, Vol. 2. | 940.0844 |
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| 80. | Humphrey, $\mathbf{D}$. | Intermediate Mechanics, 2 Vols. | 517-1327 |
| 81. | Hussain, S. | Tarikh-i Adabiyat-i Tran, Vol. 1. | $851 \cdot$ ta 5 |
| 82. | Ishwari Prasad | A Short History of Muslim Rule in India | 922.2192 |
| 83. | Kaye-Smith, S. | Tamarisk Town ... | $740 \cdot 213$ |
| 84. | Keen, B. A. | Physical Properties of the Soil ... | $530 \cdot 115$ |
| 85. | Khuda Bukhsh, S. | Poiltics in Isiam $\ldots$... | 954.065 |
| 86. | Larsen, E. S.' | $\begin{array}{cccc}\text { Microscopic } & \text { Determination of non-opaqul } \\ \text { minerals } & \ldots & \ldots & \ldots \\ \text {... }\end{array}$ | $554 \cdot 232$ |
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| 89. | Legouis, P. | Andre Marvell | 881-138 |
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| 98. | Marryat, Capt., | Mr. Midshipman Easy ... | 740.3034 |
| 99. | Maryin, F. S. | Progress and History ... ... | 970.597 (c) |
| 100. | Marvin, F. S. | The Unity of Western Civilization | 970.597(d) |
| 101. | Massingham,H.J. \& H. | The Great Victorians | 771-1026 |
| 102. | [Mathematics] | Mathematical Tables (British Association) <br> Vols. 1 and 2 | 510.5544 |
| 103. | Milton, J. | Poetical Works | $721.39(8 a)$ |
| 104. | Northrop, F. S. C. | Science and First Principles | $500 \cdot 377$ |
| 105. | Otmay, T. | Works, Edited by J. C. Ghosh, 2 Vols. | 792.023 |


| No. | Name of Author | Name of Book. | Cat. No. |
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| 106. | Peacoak, T. L. | Headlong Hall and Nightmare Abbey | $740 \cdot 3901$ |
| 107. | Poe, E. A. | Tales of Mystery and Imagination | $740 \cdot 3625$ |
| 108. | Qidwai, J. Ahmed. | Intikhabi Hasrat | 852:026(H) |
| 109. | Rangin, S. Yar Khan | Mahalis-i Rungin. Edited by S. M. H. Rizavi ... ... ... |  |
| 110. | Richtmye | Introduction to Modern Physics ... | 530.159(c) |
| 111. | Rizayi, S. M. Hasan | Ruh-i Anis | $852 \cdot 0564$ |
| 112. | Robinson, C. \& others | A Handful of Pleasant Delights | 7102332 |
| 113. | Rollins, H. E. | The Pack of Autolycus | 710:2324(b) |
| 114. | Rollins, H. E. | The Paradise of Dainty Devices | 710 2324 (c) |
| 115. | Sarwari, Abdul Qadi | Jadid Urdu Sha'iri | $851 \cdot \mathrm{Ja}(1)$ |
| 116. | Saurat, D. | Literature and Occult Tradition | $771 \cdot 1185$ |
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| 118. | Shakespeare, W. | The Tempest, Edited by H. M. Percival | 760.1378(a) |
| 119. | Shaw, G. B. | The Adventures of the Black Girl in Search for God | $740 \cdot 3887$ |
| 120-1 | 1. Simpson, E. M. | A Study of the Prose Works of John <br> Donne, 2 copies ... ... ... | $771 \cdot 0567.68$ |
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| 123. | Smith, H. G. | Minerals and the Microscope | $554 \times 483$ |
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| 125. | Smuth, Charles Phelps | Dielectric Constant \& Molecular Structure | $537 \cdot 2168$ |
| 126. | Spenser, E. | Poetical Works ... | 721-39(11a) |
| 127. | Sterne, $L$. | $\begin{array}{ccc}\text { A Sentimental Journey through France } \\ \text { and Italy } & \text {.. } & \text {... }\end{array}$ | 740:4001 |
| 128. | Sterne, L. | Tristram Shandy | 740-4002 |
| 129. | Strachey, | Portraits in Miniature and other essays | 771•1286(a) |
| 130. | Sxyeet, H. | $\begin{array}{cccc}\text { An Anglo-Saxon Reader in Prose and } \\ \text { Verse } & \ldots & \ldots & \ldots\end{array}$ | $710 \cdot 2381$ |
| 131. | Taqi, Mir Mir | Faiz-i Mir. Edited by S. M. H. Rizavi ... | $851 \cdot \mathrm{fa}$ |
| 132. | Trollope, A. | The Three Clerks | $740 \cdot 4606$ |
| 133. | [University] Oxford | Handbook to the University of Oxford | $376 \cdot 0136$ |
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| 135. | Watts-Dunton, T. | Aylwin | $740 \cdot 4783$ |
| 136. | White, E. M. | Teaching of Modern Civics | 371.0233 |
| 137. | Williamson, B. | $\begin{array}{cccc}\text { Elementary } & \text { Treatise on the } \\ \text { Calculus } & \text {... } & \text { Integral } \\ \text {... }\end{array}$ | 5141683 |
| 138. | WYyatt, A. J. | Elementary Old English Grammar | $431 \cdot 027$ |
| 139. | Wyatt \& Chambers | Beowulf with the Finnsburg Fragment | 710.0036 |

# CORRESPONDENCE 

## A PLEA FOR AN OLD BOYS' CLUB

## To

The Editor, "The Presidency College Magazine," Calcutta. SIR,

Permit me to encroach upon the hospitality of your columns and offer, in brief, my suggestions for starting inside the College a club or an association of Old Boys who have passed out of it, but still continue to cherish very fond and longing memories of it.

It is indeed a pity that the premier College of Bengal lacks a society of this type when such an association is a familiar feature of almost every college and university of importance in Europe and America. What strikes me as most tragic is that as soon as a person passes out of the College, he ceases to have any connexion with, and, hence, any interest in, his Alma Mater. That, I venture to assert, does not help to create that feeling of loyalty towards one's College which is a most wholesome feature of student-life in the West. An Old Boy of Presidency College, for instance, is thrilled 'by the news of some brilliant laurels having been won by his young successors in a football tournament or a debates competition or a university examination, but there is no means now whereby he can participate in their enthusiasm and exuberance, or even communicate to them his share of the joy.

An Old Boys' Club inside Presidency College would, in my mind, bridge this gap. It would serve as a link between the older generation and the new, and it would be a useful and happy meeting ground for men who have lost all touch with the College, but would only be too glad not only to renew associations and friendships, but to build up new ones as well.

Of course, the success of such a club would depend on the amount of active interest taken by the Old Boys themselves. In this matter Old Boys who happen to be stationed in the metropolis, and particularly those who are, in some way or other, still connected with the College or the University, may well give a lead, and I feel confident that quite a decent number of Old Boys from outside would gladly join in no time.

Personally, I feel the absence of such a club very keenly. I see that even if I wanted to renew my association with my College now, there is no organised body through which $I$ could make my first approach. As I happened to be just an humble student only eleven months ago and as I sincerely and honestly wish to keep up the mind and outlook of a student as long as I can, I shall certainly value any opportunity whereby I can strengthen my bond with my Alma Mater, whom perhaps I have learnt to love better ever since I had to part company with her.

Dated, Rajshahi, the<br>ist November, 1933.

## I remain Sir, Yours very truly, Nabagopal Das.

(Old Boy: 1926-30.)

# THE COLLEGE ATHLETIC CLUB : A FEW SUGGESTIONS 

## To

The Editor, " The Presidency College Magazine," Calcutta.
Sir,
As an old boy of Presidency College, the greater portion of whose time was devoted to the sphere of College 'athletics,' I cannot but feel very strongly for any deterioration of Collegt games. There is no room to doubt that the standard has fallen down. But remedies are not lacking to improve our standard. One has only to look for them. The present students of the College are indeed very lucky in having such a sportsloving Principal, and we note with gratitude that the members of the staff are taking keen interest in the games. I also believe that our teams do possess the stuffs which go to the making of very good players: and funds and facilities, too, are plentiful. However, I would like to make a few suggestions which, if adopted, appear to me to produce the desired result. I shall here briefly deal with each game one by one.
r. Tennis.-To effect any improvement in the lawn is really a problem for those who are in charge of it. The lawn is situated at a place, where the bustee-boys are a standing menace, and it is almost impossible to prevent them from spoiling the lawn. I therefore suggest that the lawn be shifted to a spot near the College buildings, to be exact near the hard-court. If this be done a good deal of trouble may be avoided, and one would see in a year or two a very good lawn, which is essential for tennis. I would also suggest, for the improvement of the standard, to arrange for a series of matches with the local clubs.
2. Cricket \& Football.-The Athletic Club should try to get a number of good trainers without whose help it is impossible to have a perfect knowledge of these games.
3. Hockey.-At present it is the only game which can claim to have maintained uniform standard. But it, too, requires improvement. The College has got two grounds-one within the premises, and the other in the Maidan, where all important matches are played. In the former one, practice matches may be arranged at least thrice a week from December every year. A few well-known local players may also be invited from time to time to instruct our players.
4. Basket and Volley Ball.-I have nothing very much to say regarding these games, only that our players should take them a bit seriously. The Club is fortunate to get a fine instructor in Mr. S. C. Sen, under whom personally I had the good fortune to learn to play these games perfectly.

In conclusion, I appeal to all students of the College not to regard the Athletic Club as the monopoly of a few: on the other hand, every one has a free access to all games, which, it is their duty, to utilise.

Y. M. C. A. Hostel,<br>Mechuabazar Street,<br>Calcutta, 14th Nov., 1933.

Yours truly,
Pranabkumar Sen.

# A LIBRARY COMPLAINT 

## To

The Editor, "The Presidency College Magazine," Calcutta. SIR,

It is a well-known fact that in the pursuit of higher education, nothing is of so much importance as the increasing use of an well-equipped library. Carlyle perceived it long ago and truly declared that "the true university in these days is a collection of books." But unfortunately, students reading in Presidency College cannot utilise to the fullest advantage their big library, which in some respects contains more useful and up-to-date collections than even the Imperial Library. Among other reasons, I may here be permitted to mention the practice of many gentlemen of the staff to borrow a large number of books at a time, and keep these with them for the greater part of the session. I hope I shall not be misunderstood, since I say this with due respects to them all. My point is this: We can have no justifiable ground to object to our professors taking as many books as they like on the subject that they teach, so that Honours and Post-graduate students may not be in difficulty to get them when they need, from them. But sometimes, a large number of books are found to be lying with Professors of other departments who perhaps have not any urgent necessity of them in their day-to-day teaching. We appreciate the natural curiosity of everybody to read books on subjects which do not fall within the scope of his specialised knowledge, but with the greatest respect to them, I hope they will realise that there may be many students whose need for these books may be even greater, for they, in the event of missing the opportunity of reading the books in time, may fail to do up to their mark in the examination.

As a solution to the problem, I suggest that a number of extra copies of the more important books at least on the subjects in which a large number of students take up Honours, e.g., English, Economics, History, etc., should be immediately placed in the library. We realise that our professors have a prior claim to use the library, but we equally hope that the interest of the students should not at all be ignored. At a time when Principal Sen is straining every inch of his energy to raise the prestige of Presidency College, these difficulties are the least to be desired, and the sooner they subside the better for the College.

Yours, etc.,
A Presidency Post-graduate Student.

STUDENTS OF PRESIDENCY COLLEGE FIFTY YEARS AGO.


Sir Devaprasad Sarvadhikaky,
Krishnakaly Mukherjee

Vol. XX. $\}$ APRIL, 1934.

## Hotes and 2 ens

THERE are times in the history of mankind when man is humbled to acknowledge the littleness of his own prowess. Enjoying the lavish bounties with which Nature has provided him, man is apt to forget the insignificance of his own position in the economy of the universe. But Nature is a hard disciplinarian, and with a rude hand would awake him from his self-delusion. The appalling devastation of North Bihar caused by the recent earthquake brings home to everyone of us the painful truth that what man had taken centuries to erect could be pulled down by Nature in the twinkling of an eye. Smiling cities, the flourishing centres of material prosperity, happy hamlets dotting the wide expanse of the rich countryside were all changed into scenes of the most heart-rending tragedies in which Death exacted its toll by thousands. The civilisation that we boast of as our own creation is thus merely a frail structure which even all our knowledge of science could not save from its appointed doom. How limited is the store of human knowledge, which prevents us from realising even our own helplessness! We are but tools in the hands of Nature whose mysterious decrees we can neither anticipate nor avert, and who, when she chooses, hurls down her thunderbolts on man letting loose the forces of destruction, again showering from her cornucopia the blessings of peace and progress on the world.

The calamity which has overtaken the whole of North Bihar has naturally evoked, as it should have, widespread sympathy from all quarters. But it is of a type which is remarkably in keeping with the spirit of the times, and deserves more than a passing attention. The fact that the help for the distressed is pouring in not only from all parts of India, but from such distant corners of the globe as London, Moscow and New York clearly shows how " one touch of nature makes the whole world kin," that internationalism is being slowly but surely accepted as an article of faith by the peoples of the world. As claims of humanity are gradually outstripping the bonds of nationality, the different parts of the earth are brought into closer touch with one another, and instead of thinking in terms of individual nations as before, we are now happily learning to adapt ourselves to a more cosmopolitan outlook. It is this new feeling of mutual interdependence which adds a special significance to the world-wide anxiety shown for the unfortunate victims of the great havoc, and thus brings a silver lining in the otherwise dark cloud of sudden calamity.

With the death of Prof. W. T. Webs, there is removed yet another straggler of a generation that is impreceptibly dying out of the memory of the present generation in Presidency College. More than half a century ago, we have heard it from our elders, he came out as a Professor of English here when the English staff of Presidency College contained such distinguished members as the late F. J. Rowe, J. Mann and last but not the least, though the youngest, H. M. Percival. Prof. Webb's name was always coupled with that of Rowe, as of Castor with Pollux, for the two collaborated in annotating for the Indian students some of the choicest classics of modern English literature, which are yet widely read and admired. For us who know so little of him, it is difficult to estimate the erudition and attainments of the great professor; but we feel to-day that we have lost in him an aged patriarch of our big family, a Nestor who lived to remind us of 'the good old days ' of Presidency College.

We mourn to-day the loss of also a distinguished alumnus of our College, in the death of Sir Provas Chandra Mitter. Born in a family of talents, which has given Bengal and Presidency College some of their greatest sons, Sir Provas had wielded considerable influence in the public life of his time. A stalwart among the Indian Liberals, he had faithfully served the country in his own way, and his public activities were marked not only by his conspicuous services to the Government under which he held some of the highest offices, but also
by the genuine regard which he always cherished in his heart for his nation's aspirations.

We also record with a heavy heart the death of our young friend, Devabrata Datya, who had passed the I. Sc. Examination from this College only the last year. A young man possessing good qualities of the head and heart, he has left behind him a large circle of friends to mourn his loss. Our sincere condolences to the bereaved family.

We have quite a budget of happy announcements to release regarding the College Staff. With the greatest pleasure, we convey our respectful congratulations to Principal B. M. Sen, who, we understand, is soon going to be confirmed at his present post. As pupils cannot presume to be the best judges of their own guru, we need not recall here his unique academic career of exceptional brilliance, or his great qualities as a teacher. But we cannot nass by the fact that ever since the day of his appointment his students have recognised in him a man who looks upon the duties of a Principal not as a burden of humdrum routine work, but as a pleasure which brings its own satisfaction. He thus always treats his pupils with that paternal care and ready intimacy which endear him to everyone who approaches him. With his coming, signs of a new life in the College were visible, while he realised, and rightly too, that the social life of the College should be as active as its academic counterpart. We wish that he may be with us for many years to come as we expect great things done in Presidency College during his regime. Mr. Sen, it is interesting to note, is the first Old Boy of the College to occupy its august guddee.

With mixed feelings we have received the $\mathrm{r}_{\text {ews }}$ of Prof. A. K. Chanda's appointment as the Assistant Director of Public Instruction, Bengal. It was only the other day that we welcomed him back from Chittagong and now he leaves us to take up a more important post at the Writers' Buildings. With him goes all our best wishes, though we are not a little sorry to pari with the popular figure who could and did infuse so much enthusiasm into the daily life of the College. We hope that amidst his new and severely official surroundings, Mr. Chanda will not forget the happy days that he passed with his young friends in Presidency College.

Dr. Mahendranath Sarkar, our Professo $\mathrm{I}_{\mathbf{I}}$ of Philosophy, is now touring Italy at the invitation of the Italian Government to deliver a series of lectures on Indian Phoilsophy there. It is indeed a rare privilege to be so invited and the honour con-
ferred on Dr. Sarkar has naturally filled us with pride. We are sure our learned professor will win fresh laurels in the distant lands where the culture of the East stands so badly in need of interpretation by its savants. We have also the pleasant duty to announce the publication of Dr. Radhagobinda Basak's book The History of the North-East India which has received unstinted praise from such leading authorities on the subject as Rapson, Sten Konow, Poussin, Jayaswal and others. Dr. Basak to whom we owe an apology for our failure to welcome him in these pages through oversight, came here from the Dacca University on the retirement of Prof. Harihar Vidyabhusan last year. We congratulate him on his monumental work which is the result of long and patient research in the difficult field of Indian antiquities.

We are sorry to record the unexpected removal from our midst of Prof. Asokenath Bhattacharyya of the Sanskrit Department, by what is known in official language as " the exigency of public service,"-the post having been kept in abeyance for the present.

Whenever any signal distinction is attained by an Old Boy, it never fails to make the alma mater delighted and proud. We rejoice at the appointment of Sir Nripendranath Sircar as the Law Member of the Government of India in succession to another ex-student of this College, Sir Brojendralal Mitter, whom, at the same time, we welcome on his return to Bengal as a Member of the Governor's Cabinet. We are also glad to find Mr. A. K. Roy, yet another Presidency College man, being made the permanent Advocate-General of Bengal.

We desire to congratulate our friend, Mr. Ajit Kumar Majumdar, who is one of the two Bengalees selected, on the results of the open competition for the Indian Police Service this year.

Two of the former editors of this Magazine have been the honoured recipients of doctorate degrees recently. To Prof. Phiroze E. Dustoor has been conferred a D. Litt. by the Allahabad University for his thesis entitled " Legends of Lucifer and Adam, especially in Old and Middle English." Prof. Dustoor has a brilliant academic career all along, occupying the top places almost in every examination, and has already published more than a dozen papers in first-class research journals of England, America and the Continent, which were praised by authorities on the subject like Prof. Karl Young, J. E. Wells and Dr. R. B. Mckerrow. The tie which binds him to this College is not merely that of a student, because he was for sometime a Lecturer in English here. At present he is a Reader in English at the Allahabad University.

Prof. Subodh Chandra Sen-Gupta, who was in our midst only a few months ago, has received a Ph.D. of the Calcutta University for his dissertation on Bernard Shaw which was examined and highly spoken of by such eminent critics as Prof. Cunliffe, Oldershaw and Allardyce Nicoll. Prof. Sen-Gupta too has a brilliant academic record, and has already made his mark also as a well-known writer in Bengali Literature. The Magazine offers its heartiest congratulations to both the learned Doctors.

The bope that was entertained in these pages last time about the possibilities of opening an Old Boys' Club in the College has, we are glad to report, taken shape. The suggestion naturally roused keen interest among a number of ex-students, and we are glad to find that their zeal was not spent up in the usual offering of good wishes and blessings, but that they are seriously proceeding with the work of framing a constitution of the proposed association. It is, however, mainly through the indefatigable efforts of our distinguished Old Boy and Professor, Mr. P. C. Mahalanobis, that the Presidency College Association, as has now been proposed to christen it, has been an accomplished fact. There is certainly joy in the sense that what was repeatedly expressed as only a pious hope, has at last come to be actually realised. The success of this new venture is anxiously awaited, if for nothing else, at any rate to give the lie to the mistaken impression that our alumni, as soon as they drift away from the moorings of College life into the practical world, speedily cease to interest themselves in the affairs of the alma mater. To us the birth of the Association is of momentous consequence as it should be to the old Presidency College men; for, if run on proper lines, it will soon exercise the moral authority of an Areopagus over the whole body of Presidency College students, past, present and future.

While the prospect of the newly started Association is actually encouraging, the Union, which is of more immediate concern to us all, has undoubtedly proved an indispensable asset to the social life of the College. It can point with pride to a splendid record of active service since its revival at the beginning of the current session. The Autumn Social, the Founders' Day, the Steamer Party as also the Earthquake Relief Fund which collected within a very short time the decent amount of Rs. $1,700 /$ - are some of its very successful achievements, for which it has reasons to congratulate itself. But we are not yet satisfied with
what we have and surely we ask for more. To borrow a common analogy from Indian politics, as we have already given sufficient evidence of our abilities to manage our own affairs, the grant of autonomy should no longer be withheld from us; and what we demand as autonomy is only the right to elect our own representatives to the offices of the Union. Democracy, though almost a discarded principle in politics to-day, has not yet ceased to charm the young minds of students!

Leaving aside the Union, we are glad to find that most of the other societies are continuing their useful career with more or less credit. The Athletic Club under the revised constitution, for instance has become very popular among the students, nearly 600 of whom, according to the Principal's Report, take part in some form of game or other. It may be true that our teams have not fared very well in the various tournaments in which they competed, but success is not always a very sure criterion of enthusiasm; and certainly we should prefer the latter to the former.

The Rabindra Parishad is another institution which deserves special mention. Its meetings, crowded as they are by professors and students, as a rule provide intellectual treats of not a very mean order. Sometimes, the Poet himself comes to address the Parishad; for many of us, it is a long looked for opportunity to listen to his sweet and resonant voice, and look in awe at his beaming countenance mellowed by the impress of age. He is as fresh and young as ever: and though he has passed the Psalmist's " three score years and ten," yet age cannot wither the Poet nor custom stale his infinite variety.

Problems of educational reform have for some time past been engaging the attention of the leaders of thought throughout India. But the situation in this Province is perhaps the most acute, and as such demands the most urgent and serious considerations. The educational system of Bengal in all its aspect and stages can by no means be described as working satisfactorily. The Quinquennial Review of Education in Bengal, published recently by the Government, is a frank recognition of the hopelessly confused state of things in the whole educational domain of the Province. Speaking of primary education, the Review reveals the most astounding facts: e.g., " Bengal spends the smallest percentage on primary education, the contribution by public bodies to the total primary expenditure is lowest in the Province, the expenditure per head of the population is the lowest, the expenditure per school is the smallest, the expenditure per scholar is the least,
the average fee the highest." This drives one, as a matter of course, to the alarming conclusion that 'in Bengal, literacy instead of spreading is in fact dwindling."

But it is not only in the sphere of primary education that ours is an unenviable lot, the state of University education also demands the most radical changes. We make no apology for quoting in extenso the following striking observations made by Principal Zachariah in his . Report at the last Founders' Day of the Hooghly College, which, we consider, should have wider publicity than can be obtained by the magazine of a mofussil college:-
" Nothing seems to me to be more dull and less useful than the ordinary methods of teaching and study in our colleges. I shall not attempt to assess the proportion of blame for this between the pioneers of our educational system who did not always know or care whither they were tending, the University which, in its avowed pursuit of the advancement of learning, is often too easily misled by false lights and will o' the wisps, us teachers who are too prone to fall into the grooves of routine and work for a living rather than for fullness of life, and the students betrayed by the indolence of human nature and the triviality of human ambitions, but on the whole more sinned against than sinning. Our ordinary methods of education are two-fold: mass lecturing, relying in the main on the reiterated impact of the spoken word, and the memorising of ready-made answers to probable questions. Knowledge thus appears to the student as hard and external and unappetising, as a thing mis-shaped and smali, tangible and gulpable like a potato. But it is not thus that the love of goodness, beauty and truth is kindled and that the head and heart of youth which are naturally responsive to them are quickened and disciplined for their sensitive apprehension. This is why the tutorial system with its opportunities for discussion and its emphasis on clear thinking and precise expression, as well as library work which opens up new and enchanting vistas, widens the mind and stimulates the imagination, are indispensable parts of any educational plan."
This brilliant and searching analysis of the conditions of our University teaching emphasises the need of immediate reforms in both outlook and practice. Education that is imparted in our schools and colleges has taken a very rigid and stereotyped shape never creating or even aiming to create the atmosphere congenial to the healthy expansion of a students outlook and the power of original thinking. It is now high time that our educationists should bring in new life and
spirit into this vicious and lifeless automaton, thus fulfilling the sacted trust reposed in them of giving proper intellectual pabulum to the youth of the country and making them truly "educated" and not superficially " learned."

The course of Indian politics appears to be dull and monotonous entirely unrelieved by any great happening of abiding interest. The Swaraj Party is proposed to be resuscitated and this has been hailed as a move in the right direction. But its revival is a sad confession of the failure of the Congress policy. The Mahatma seems to possess only two weapons in his armoury to fight the Government-the Civil Disobedience and the Swarajist, and when one becomes blunt he uses the other to carry on the "war." Thus the Congress adopts alternately the policies of Non-Co-operation and Co-operation. History, it may therefore be inferred, is made to repeat itself at least in the case of the Congress! However, none can dispute that the proposed step will greatly dispel the uncertainty and suspense which demoralised the rank and file of the Nationalist Camp. But how far the new Swaraj Patty will prove to be a faithful replica of the old depends on the calibre of those of whom it will be composed. To find out a substitute for Motilal Nehru, Vithalbhai Patel or Chittaranjan Das is a task which the Congress will not find it easy to accomplish, for such leaders are borm and not created, and they appear not frequently or even regularly like the fruits of the season; and a Swaraj Party without stalwarts like this may prove to be a mere mockery and a name.

While the earthquake has engrossed the attention of everybody in India, Europe experienced shocks of a different nature during the past few months. The Stavisky denouement suddenly plunged France into an outburst of riotous indignation, and shook her confidence in parliamentary government, although it is yet too early to predict that she would commit herself to Fascism or any such reactionary political creed. Austria also had a trying time in destroying the Socialist bacilli that infected her from across her borders. Spain, too, was not without her troubles, while the hunger-marchers in London lent a mild but significant sensation to the tense atmosphere; it however touched "Mac," the erstwhile socialist leader, in a vital point and rubbed off the veneer of socialism from him revealing the imperialist that office has gradually transformed him into. The talk of Disarmament, hollow and halting at the best of times, has petered out ; the Disarmament discussions after
a great deal of dilly-dallying and shilly-shallying has finally receded out of serious politics. Thus a wave of restlessness is sweeping all over Europe shaking the roots of the old order, although the birth of a brave new world seems to be indefinitely postponed, who can say, if not until the close of the next world war that daily threatens to break out and whose sword-rattling might be heard above the droning of the academic discussions round the table of the Disarmament Conference.

This issue of the Magazine brings to a close the present editor's term of office. To conduct a journal of this type is, for a studenteditor, not only a pleasant privilege, but also an education by itself. He is not unaware of this own limitations-both as regards powers and opportunities-and if he has failed to satisfy all, he hopes and trusts that his readers will be generous in overlooking his shortcomings in the assurance from him that he has tried his best to serve the Magazine faithfully and to keep it up to its proper level. To all the students of Presidency College, past and present, he is thankful for the help they have rencered-particularly to the former, to whom he owes special thanks since the little success, if any, that he could command in editing the paper was due greatly to the ready assistance which they were always kind enough to extend whenever he approached them, either for contribution or for guidance. The editor will be failing in his duties if he does not also acknowledge his satisfaction at the prompt and efficient work done by the Press in connexion with the production of this Magazine.

# Some Notes on Student Life 

Humayun Kabir.

LIFE in Oxford or in any other of the unitary residential universities must necessarily present certain features which we cannot hope to find in a federal non-residential university like the University of Calcutta. Yet there are certain aspects which can be grafted upon our system here, and it seems to me, grafted to the advantage of the teaching and the student communities alike. Whatever benefits these two communities cannot but in the long run prove of great value to the life of the nation and the country.

The first thing to consider in this connection is the length of period that a student is expected to put in at the University. Schoolboys are schoolboys all over the world, and to transform them into respectable and useful members of society needs an intervening period of disciplined freedom. There may be exceptions here and there, but generally speaking, a schoolboy cannot be expected to possess the degree of foresight and responsibility which is needed for successful and productive social life. Life at a University or College should effect the transition from the carefree and happy irresponsibility of the school child to the well ordered and disciplined life of the citizen.

English boys, I am speaking here of those who want to go up to some University, generally leave school at the age of eighteen or nineteen. They have already had one or two years' training in initiative and responsibility, for in their last few years at school, they are expected to act as the leaders of the smaller children, who are often placed in their charge. This system may and does sometimes lead to abuse, but the possibilities incipient cannot be overlooked. The older boys have to make their own decision and act on them; they are made monitors of small groups of younger children, whose interest they are thus forced to consider, and they have to render some account to the teacher of the way in which they have carried out their charge. They no doubt bungle and make mistakes from time to time, some of them prove capricious and selfish and unthoughtful of their charge, but their sphere of operation is strictly limited, and under the constant surveillance of the teacher, their mistakes cannot have any deep and far-reaching effects. On the contrary, through trial and error, they gain in experience and character, so that, when, later in life, their decisions are
effective in a wider region of society, they can avoid many of the mistakes which they would otherwise have made.

Then they come to the University and remain there for three years, if not more. Proposals have been from time to time made that the University courses ought to be shortened, that what was fitting and proper in the more spacious days of the past can no longer be justified in the modern world of speed and haste. In short, it is claimed that University life should be got through at high pressure and the students "finished" for a competitive life in the world as early as possible. Student life is a period of seclusion and safety, but in the modern world there is no room for either, and the sooner the students come out of its urreal quiet into the storm and stress of the real world, the more likely are they to succeed in facing the keen competition which rages to-day.

There is no doubt that the saving of a year could be a great advantage, if other things remained the same. Yet most teachers at Oxford and Cambridge and other residential Universities are opposed to such a change, for they contend, and contend rightly, that the mere taking of a degree, or even the mere acquisition of a certain amount of information is not the end which they have in view. The learning acquired might perhaps be managed in a shorter time, and the examination on the results of which the degrees are granted might perhaps be taken successfully without living in the University for a single day, but they insist that living in the University for three years is itself a necessary part of the education imparted there. When there was once talk of admitting candidates to the Cambridge Degree Examinations without the residence qualification, the Master of Corpus remarked, "Cambridge is not primarily a place of learning or a place of examination. It is a place where you live for three years."

Now it is very easy to parody this attitude and yet it is fundamentally sound. For the three years' residence at the University gives the young man a chance of further developing those qualities of initiative and leadership, responsibility and consideration for others which begins with his last years in school and is continued, on a larger and more generous scale, throughout his student life. For the development of this corporate sense, any period shorter than three years is hardly adequate, specially when we remember that for more than six months every year it is holiday and the students are away from the University. Nor would it do to cut the vacations short and concentrate residence in the University into longer periods of unbroken continuity. This would keep the letter of the law, but only by violating its spirit. Students come to the University from different social and geographical
areas and have all the manners and mannerisms of their own locality. The University seeks to soften the mannerisms and smooth the angularities by insisting upon a common culture of the intellect and emphasising the corporate rather than the individual aspects of human life. If the University is to succeed in its aim, it must be permitted to proceed in a slow and gradual manner, for otherwise, all the value of its training would be negated as soon as the student walked out of its precincts and returned to the social sphere from which he came.

Periods of life at the University interspersed with equal periods of life at home among his familiars enable the student to consolidate the teachings of his collegiate life and prepare him to be a useful member of society. This is the secret of three years' residence at the Univerity, and any period less than that is too short for the purpose.

Again, it is a curious paradox that education is of the greatest use when it does not consciously seek to be useful. For philosophers and men of science the search for mere utility is therefore dangerous, even illusory. The application of his knowledge may be the reward, but it is not and cannot be the goal of the philosopher or scientist. Nature herself teaches us the same lesson in the field of biology. The higher in the scale of evolution an animal is, the longer is its period of immaturity and dependence on others for its sustenance. Nor is this period of immaturity one of conscious preparation for its later life, for it is only among the most highly developed animals that we find the instinct of play in its pure form. Among lower animals, play is utilitarian and directed towards the development of those instincts and capacities which will prove useful in its future struggle for existence. Human beings alone play disinterestedly, for often their play has no relation to the life which they are called upon to lead.

The bearing of this upon the three years' seclusion in a University is obvious. Life in a University may be compared to that of china cups in a glass cage, carefully arranged and constantly dusted, protected from all the struggles and stress which make up the life of day to day. But even this china-cup-life has its advantages. By detaching the students from the context of the real world and placing them in a universe of their own, they are enabled to obtain an intellectualised and rarified foretaste of the life to come. It breeds in them a spinit of detachment and serenity which is perhaps the richest possession a man can have, and by training them to take with equal grace their victories and defeats in this smaller sphere, it serves as the best of training grounds for the triumphs and vicissitudes of later life. In a word, by its very unreality and its aloofness from the work-a-day world, the University is best qualified to train up students for their future stations in life. I
may refer here to Newman's famous description of the educated man, who "has the repose of a mind which lives in itself while it lives in the world and which has resources for its happiness at home when it cannot go abroad," who " has a gift which serves him in public and supports him in retirement, without which good fortune is but vulgar and with which failure and disappointment have a charm."

All this, however, is theory, and very incomplete and sketchy theory at that. Perhaps the principle of education underlying residential universities could be developed into a full-fledged thesis of some thousand odd pages, and-who knows? -some of the multifarious universities of the world might reward the labour by the confernment of a Doctorate in Ed. (Th.). But who wants to listen to theory? And you would much rather that I talked about life in Oxford, about students and what they do, the pastimes, the divisions and the oddities which make up their daily life. Instead, I have been digging, and digging most half-heartedly for the principles which are supposed to lie deep down at the basis of their University life. But then, it is so much easier to theorise than to be concrete; perhaps, some other day, I might be able to say a little more of Oxford life and less of its philosophy.

## Looking Back

SIFTING the memories of the past, one is at once struck by the distinction borne by the memories of one's College. Perhaps it will not be quite proper to speak of the memories of College, for they are different from the memories of other things ; in fact, they are far less solid than memories. The best of what a College leaves behind is not memories but memory, not things remembered but just an effecta feeling a tender grace. The individual things that had once made up one's college life get more and more blurred in the haze of distance. They have played their frail and insignificant parts, and they justly fade out. But out of this death of detail is born a new entity, and it is-the College. One does not know exactly what it is ; one can identify it with no known or experienced thing in one's college life; still one feels it as the spirit that animates one's reminiscence of-college life, hovering over it all as a presence infinitely benign. The parts are lost in the wholeness ; the accidents in the essence; the actions in the feeling; the objects in the soul. And then it is that one feels a sudden closeness grow up between himself and the College. Then he receives the heart of the College into his own.

It is curious to think how impersonal is the love that a College inspires. While in the College, one goes on accumulating grievances -grievances against men, against things, against systems.' Out of it, one is surprised to discover that, unloved in parts, the whole has come to enthrone itself firmly in his affections. There may be doubt about the individual things, but there is no doubt about the College. Curiously enough, too, it is through its inanimate parts that the College makes its appeal most strongly felt. The enduring impress which Presidency College leaves on the minds of its alumni-the very hall-mark, so to say, of its claim upon them-is its building, the very brick and stone of that building, and the associations that they evoke. The clock-tower; the pillars; the magnificent staircase; the sweet security of its rooms; the lovely gloom stored up in its obscure nooks and corners; the hot eager life that swept at day time through its spacious corridors, and the hush that fell there with the decline of day; the deep blue that suddenly descended at the silent hour of noon on the fragments of sky caught between its open spaces; the tall deodars in the front, the sudden greenness of whose leaves
one unperceived spring morning entered the heart with a gentle shock of mild surprise ;-these are the memories that abide.

In this respect the Arts students of Presidency College have scored a distinct triumph over their Science brethren. By the side of the Arts building there is something pale and thin about the Baker Laboratory; and the latter can by no means inspire the same depth of affection, the same glow and grace, as the former. It is not merely the difference between two styles of architecture. It is a difference in tone and temper, in outlook and philosophy of life. It is the difference between milk and water; between Horatio and Lærtes. The Baker's speech is modern, crisp and thin ; its poet is Tennyson; its optimist is Browning ; its pessimist Omar Khayyam. The Arts building's speech is Tuscan, full, flowing and dignified; its poet is Keats ; its optimist is Epicurus ; its pessimist Virgil.

One thing that makes a College building of more than ordinary interest is the existence about it of a mysterious, almost sinister, possibility-the possibility that it may begin some day to beat with the sounds of footsteps like that curious house near Soho-square in Dicken's Tale of Two Cities. For this is what distinguishes a College building from others, viz., that it has beat to the footfalls, various and numberless, of generation after generation. Where are those sounds gone? Have they died away in the air? Or are they stored up in the stone where they fell and in the brick where they resounded, waiting to be brought out by some ingenious scientist? Could one, if one laid one's ear in some secret corner of the building at night, hear the phantom tread of the past all over again?

What life indeed do these public buildings live at night? We know but little about the life of our College; we have seen her only for a few hours at daytime. But what about the life that begins when the building falls a-musing under the spacious loneliness of the night? Is there an hour when a secret life begins to heave within the stones, and brick calls unto brick? Could some chance intruder at that hour catch the building in the act of awaking to itself? What breathings and whisperings would he hear, what shadows would he encounter? What activities would he come upon and disturb were he suddenly to break into one of the locked and deserted rooms? We shall never know enough about Presidency College.
T. N. S.

# The Problem of Nationalism and the Reconstruction of History 

Anil Chandra Banerjee, m.a.-Ex-Student.

0RTHODOX historians are apt to regard the nineteenth century as the blessed era of Democracy and Nationalism, and to project on to these new-found twins all the divergent currents of a very complex phase of human development. And yet Democray, enthroned in Western Europe, was fighting shy in the East, and neither the humanitarian statesmen of the Gladstone type nor the ruthless nation-makers of the Bismarck class cared at all for the stern racial realities in the continent over which they ruled. When we are told of the triumph of Nationalism in Germany and Italy, we forget, or are made to overlook, the very unpleasant and incongruous facts that the Fatherland meant nothing at all to the millions of Germans in Austria, that the Germans ruled over masses of Danes in Schleswig-Holstein and of French in Alsace-Lorraine, and that millions of Italians in the Tyrol were oppressed by the Germans of Austria and those in Savoy and Nice were citizens of France. And when we turn to the non-national empire of the Hapsburgs, to the numerous Balkan States where peoples of a dozen different racial origins lived and fought under the same banner, and to the picturesque museum of Ethnography over which the Romanoffs ruled, we realise, once for all, that catchwords, however alluring, are dangerous, and that even the Divine Right authority of the older Historians cannot safeguard the artificial citadel from the violent inroads of a new outlook.

In analysing the pre-War aspect of the problem of Nationalism we must offer the place of honour to Austria-Hungary where it had always exercised an altogether peculiar influence. Austria had ever been a polyglot State, built up by the persistent dynastic policy of a single family, on a basis of geography, round the great river system of the Danube, but with an almost complete disregard of ethnographic considerations. The result was a vast mosaic of races, who fell into five main groups-Teutonic (Germans), Slavonic (Czechs, Slovaks, Poles, Ruthenes, Croats, Serbs, Slovenes), Latin (Italians,

Rumanians), Ural-Altaic (Magyars), and Semitic (Jews). Thus, leaving aside altogether certain minor groups, there were twelve principal nationalities and ten principal languages, exclusive of dialects, in Austria-Hungary. And the problem of government was complicated still further by the fact that these races were still in very varying stages of civilisation, some of them being as highly developed and as well organised in matters of education or industry as many Western nations, while among others illiteracy and superstition were still rampant.

The history of Hapsburg policy, both internal and external, had been a long series of wasted opportunities, of hesitation between alternatives. Just as it stood in foreign policy for the rival tendencies to gravitate westwards to Germany and eastwards into the Balkans, so it represented in home policy the fatal indecision which had led Austrian statesmen to dabble alternately in centripetal and centrifugal forces, to foster or to repress individual national movements according to the political constellation of the moment. The Ausgleich of 1867 marked a new point of departure in the history of the Hapsburg Monarchy. The real motive force behind the Dual System was a league between the two strongest races, the Germans in Austria and the Magyars in Hungary, who divided the Monarchy between them, and by the grant of autonomy to the two next strongest races, the Poles and the Croats, made them their accomplices in holding down the remaining eight.

In Austria, the German hegemony did not last long, owing mainly to the opposition of the Czechs. The constitution secured equality to every one of the recognised races and languages. As a result, racial and linguistic disputes paralysed the whole internal policy of the State and Austria was reduced in the Dual System to the rôle of a simple appendix of Hungary.

In Hungary, the leadership of the Magyars rested upon a thorough-going and oppressive racial monopoly which had been rendered possible by a concentration of all political, social and agrarian power in the hands of the Magyar nobility and by their economic alliance with the Jews. The many linguistic and racial concessions laid down in the Hungarian "Law of Equal Rights of the Nationalities" remained a dead letter. Primary and Secondary education was enlisted in the cause of Magyarisation, and the State never established or patronised non-Magyar schools. The local administration was under the control of a narrow Magyar caste, which by means of an illiberal franchise held the non-Magyars in a permanent minority and excluded them from the direction of their
local affairs. A far-reaching system of electoral corruption, supported by a complicated and unequal franchise, made it impossible for onehalf of the population to gain more than eight seats in Parliament, and concentrated all political power in the hands of a small group of Magyar nobles and Jewish financiers. The dependence of the Judicature upon the Executive rendered the non-Magyars liable to continual vexation at the hands of the law. The persecution of the non-Magyar Press reduced it to a state of impotence. The absence of any rights of association and assembly placed the non-Magyars at the mercy of their rulers. In a word, the Magyarisation of Hungary was openly proclaimed as equivalent to "the victory of reason, liberty, and intelligence," and the bare idea that non-Magyar culture could co-exist with that of the ruling race was scouted as treason to the State.

It is under these conditions that the Serb, Slovak, Rumanian, Ruthene and German nationalists had long been political pariahs in Hungary; but persecution had not tamed them. The Serbs desired to join Serbia and to create a great Southern Slav State after the model of the medieval Serb Empire of Stephen Dushan. The Slovaks aimed at joining their kinsmen, the Czechs, who had already made their influence felt in Austria and were werking for the restoration of their national independence embodied in the historic Kingdom of Bohemia. The Rumanians naturally gravitated to the national Rumanian State beyond the frontiers of Hungary. And the Ruthenes wanted to secure a settlement which would render possible their free national development in the future, even if it was impossible to unite with their kinsmen in a liberated Ukraine.

In the Balkan Peninsula the problem of Nationalism has been complicated by religion. Under the twin influence of the Turkish conqueror and the Greek Confessor, Nationalism long lay dormant, until, with the close of the eighteenth century, came the first mutterings of the storm. Since then the history of the Balkans is an unbroken succession of waves, in which first the Serbs, then the Greeks and Rumanians, and last of all the Bulgarians shook off the Turkish yoke and laid the foundations of the national States of to-day.

The origin of Pan-Slavism as an intellectual ideal has been traced to the writings of the monkish chronicler Nestor in the eleventh century. Among the Slav nations-the Russians, the Ruthenes, the Poles, the Czechs, the Slovaks, the Serbs, the Croats and the Bulgars-there is, in spite of the inevitable internal quarrels springing from geographical configuration and political vicissitudes, a mystic
solidarity of feeling which rises superior to all differences of language, religion, geography and history. This solidarity has been emphasised, and the meaning of Pan-Slavism explained and extended, by numerous scholars and writers-Krizanic, a Slovene' schoolmaster of the sixteenth century ; Kirejevski, and Homiakov, Russian Slavophils of the nineteenth century; Danilevski, the Russian author of Russia and Europe, Kollar, the famous Slovak clergyman, whose long epic poem, The Daughter of Slava, sang the glories of Slavdom.

It was this ideal of Pan-Slavism which induced the liberated national State of Serbia to hope, under the good will, if not the patronage, of Russia, the patron deity of Slavdom,* that it will some day be able to redeem the millions of Serbs and Croats from the nightmare of Austro-Hungarian tyranny-a hope which brought it into inevitable conflict with the Hapsburg Monarchy. Either free Serbia must become a conquered province of Austria-Hungary, or it must unite the entire Southern Slav race in a single State. As the famous Pan-Slav General Fadejev wrote long ago: "The existence of free Slav Kingdoms bounding with enslaved Slav countries is impossible. How can Austria allow a second Piedmont, whose influence would not be confined to a comer of her Empire, but would extend to its centre?" And the General truly predicted: "Austria has only two paths-either the Slavs of Serbia must share the fate of the Hungarian Slavs, or the Hungarian Slavs must attain the position of Serbia to-day." This dilemma, correctly appreciated both by Count Tisza, the Hungarian Premier, and M. Pashitch, the Serbian Premier, was the most important of all the political problems which lay at the root of the World War.

Bulgarian history is full of extraordinary vicissitudes. The power of the first Bulgarian Empire was broken at the Battle of Belasica in

[^18]1014 by the Greek Emperor Basil. Three hundred years later the second Bulgarian Empire yielded to the Serbs. Finally, under the grinding and oppressive rule of the Turks, Bulgaria disappeared from the list of nations for about five centuries. When at length the deathlike quiescence of the Bulgarians gave place to a new enthusiasm, the breath came to them from Russia and from Serbia. The Treaty of San Stefano, 1877, which would have quite unduly aggrandised Bulgaria at the expense of her neighbours, was replaced by the Treaty of Berlin, 1878, which perpetrated upon her a cruel and intolerable injustice. But it is the exaggerated programme of San Stefano which became a fixed idea in the minds of the Bulgarians. The desire for Bulgarian national unity was swallowed up in a claim of racial predominance which postulated the disappearance of Serbia from the list of nations and the reduction to impotence of Greece and Rumania. Bulgaria wanted to annex Salonica and the so-called "contested Macedonian zone," but was forced to surrender them to Greece and Serbia respectively after her defeat in the Second Balkan War in rgiz. This, more than anything else, explains Bulgarian participation in the World War.

Pre-War Rumania consisted of the two provinces of Moldavia and Wallachia; but about seven millions of unredeemed Rumanians lived in Bessarabia under Russia, in the Bukovina under Austria and in Transylvania under Hungary. Slav Russia was not at all sympathetic to the Latin Rumanians, and steadily pursued a policy of pitiless Russification in Bessarabia. The political system under which the Rumanians in Hungary lived was one of the grossest tyrannies of modern times. By participating in the World War the Rumamians merely tried to set their kinsmen free from their stagnant fate under alien misrule.

Time after time Russia, the one hope of the Slavophils, has gone to war for the cause of her Slav kinsmen or her orthodox coreligionists, and the democratic countries of South Eastern Europe owe a great part of their liberties to the efforts of the Rusian autocrats. But within her own borders, Russia ruled over millions of Finns, Esthonians, Latvians, Lithuanians, Poles, Ukrainians, Rumanians and Turks, even if we exclude from this list the countless races inhabiting her Asiatic dominions.*

[^19]In the past, Finland has always been the battle-ground between Swedes, Russians, Poles and Germans. Since Russia wrested her from Sweden in 180g, her position has always approached that of independence. Under Nicholas II a violent attempt was made to Russify the Finns.

Both in servitude and in freedom, Esthonia and Latvia have had a common history. When the Russians conquered both the countries at the beginning of the eighteenth century, they did something to raise the condition of the people who had been reduced to serfdom by German landlords in the Middle Ages.

Lithuania was not a homogeneous State. In the Middle Ages; it was under the hegemony of the Poles, but later on Russia incorporated it.

Though the Russians and the Poles are kindred in race, being perhaps the two most important members of the Slavonic family, yet the cleavage between them is fundamental. In the past, Poland represented Catholicism and Latin culture, Russia Byzantinism and Orthodoxy. Poland was a great nation; she had once invaded and dominated and colonised many parts of Russia. But in the eighteenth century Poland became weak, was partitioned between Russia, Prussia and Austria, and thus destroyed. In the nineteenth century strenuous efforts were made by the Czars to Russify the Poles. Their separate constitutional position was abolished, their language and institutions were not recognised, and they were denied access to administrative posts. But nations do not die readily, much less a nation so gifted and brilliant and patriotic as the Poles.

The Ukrainians, a nation of thirty millions, were mostly under the rule of Russia, though some five millions were incorporated within Austria-Hungary. In the sixteenth century, they had surrendered

[^20]themselves to the Russian ruling dynasty by a treaty which guaranteed their separate national existence based on an ancient constitution. But, naturally enough, this treaty was treated by triumphant Russia as a mere scrap of paper, as in the case of Finland, and the Ukraine remained for centuries an integral portion of Russia and a co-sharer of the tender mercy of the Romanoffs.

It is perhaps unnecessary to point out that, while the fate of the various nationalities in Russia was infinitely worse than that of those in Austria-Hungary, the problem of Nationalism was far more acute in the latter than in the former State. The explanaton of this apparent paradox is not far to seek. In Russia, a stranger to democracy, it was only the exclusive caste of the aristocrats which counted, and the mass of the Russians suffered equally with the subject nationalities. The stagnant polity of Russia had succeeded in strangling the nationalist tendencies of every other race except the Finns and the Poles. But in Austria-Hungary, a Parliamentary State, where two nationalities dominated over the other ten, it was not possible to stifle the activities of the latter with the same deadly means which the Czars employed.

Such, in outline, was the problem of Nationalism in Europe in July, 1914: The Great War, which was hastened by the assassination of the Austrian Archduke and Heir-Apparent Franz Ferdinand in the streets of Serajevo by Serb nationalists of Bosnia, was in some respects a drastic attempt to solve that problem. Had the tension between Austria-Hungary and Serbia been less serious, had Magyar tyranny been less intolerable to the Slavs, had Russia found it possible to accept the status quo in respect of the Slavs in the Balkans, and had not the results of the two Balkan Wars been unsatisfactory to Bulgaria, Serbia and Greece alike, it is more than doubtful whether Anglo-German naval rivalry and Franco-German ill-feeling could or would have resulted in so widespread a conflagration at that date.

The task which confronted the authors of the Versailles Treaty was really tremendous. The old world of Europe disappeared during the War. Consumed in the furnace of the War, Europe had become a mass of molten metal, and had to be shaped anew. Historical traditions, geographical factors and economic considerations made it well-nigh impossible to arrive at such a scheme of reconstruction of the shattered edifice as would satisfy the political aspirations of the suffering nationalities, ensuring at the same time the interests of the victors and the future peace of Europe. One thing, however, is certain. The peace-makers tried to comprehend the distribution of races throughout Central and Eastern Europe, analysed how this factor had reacted upon international policy since the days of Napoleon, and decided
that the key to the solution of political difficulties would, to a large extent, be found in an intelligent adjustment of the racial problems involved.

It is unnecessary to enter into details concerning nation-making in the new Europe. Austria and Hungary became separate States. The Czechs and the Slovaks restored their ancient independence in a new republic. The Serbs, the Croats and the Slovenes united to establish the new kingdom of Yugo-Slavia. Poland became a free republic. Finland, Esthonia, Latvia and Lithuania ceased to be portions of Russia, and the Ukraine was set up as an autonomous unit within the Union of Socialist Soviet Republics.

Generally speaking, therefore, all the principal nationalities, which had so long been submerged under the tyranny of polyglot empires and denied the primary right to political self-expression, were, as a result of the War, set up as independent states, and succeeded in realising their century-long aspirations. But the racial controversy was far from being finally solved, and the problem of Nationalism continued to be a burning factor in European politics. The new nations created by the Treaty of Versailles include within their borders large numbers of hostile aliens. Czecho-Slovakia has Germans and Magyars. Poland has Ruthenians, Germans and Jews. Yugo-Slavia has Magyars and Italians. Rumania has Magyars and Russians. Italy has Germans and Slavs. "There are, as it were, potential Alsace-Lorraines in all these states. The presence of a foreign element in the body of a nation is a perpetual source of irritation, a perpetual waste of strength, a perpetual invitation to revolution from within and to war from without."

The old problem of Nationalism still lingers, if in a less acute shape, and Political Science, therefore, must search for a solution. Before the War, the solution offered by federalism, or by extensive local self-government was sometimes discussed, specially with reference to Austria-Hungary, where the Archduke Franz Ferdinand was believed to be a supporter of the transformation of the Dual Monarchy into a Triple Monarchy in which the Slavs would enjoy the same rights as the Germans and the Magyars. Whatever the theoretical merits or demerits of the proposed solution may be, the post-War distribution of races in Czecho-Slovakia, Poland, Yugo-Slavia or Rumania is clearly unfavourable to its success. The grant of extensive local selfgovernment, moreover, even if it were possible in view of the conflicting economic interests of the various groups within the same state and of the lingering fury of racial hatred in Central and South Eastern Europe, is a policy of considerable hazard from the point of
view of the majority community as well as in the interests of the unitary state.

The Bolsheviks have offered quite an interesting and original solution of the problem. They assert " the principle of racial and linguistic federalism in the parts, and of economic unity of the whole." This suggestion is obviously based on the Bolshevik theory that man is primarily an economic animal. The interests of the proletariat being identical all over the world, it is quite possible that peoples of different racial origins should see their way to merge themselves in a central organisation which would preserve and further those interests. At the same time this central organisation should allow each of its member-races to have exclusive authority over its own individual linguistic, religious and administrative problems. In this way, both the general and the local interests of hitherto struggling neighbours would find expression in a new type of state which would be immune by its very nature from unduly strong centripetal or centrifugal forces.

Whether economic reasons can soften racial hatred yet remains to be seen. At any rate, the Bolshevik theory of the state will not be generally accepted so long as its authors cannot demonstrate to the world the success of the economic system on which the whole struc. ture of their polity is ultimately based.

The peace-makers of Versailles finally accepted the solution of the League of Nations, " the interposition of a just and impartial arbiter between the sovereign state and its racial and religious minorities." They acted upon the model provided by the Treaty of Berlin, 1878 , which required Bulgaria, Serbia, Montenegro and Rumania to ensure civil and political liberty to their subjects irrespective of their religious creeds. These terms, however, were of no avail when there existed differences of opinion among international lawyers as to the effect of violation and when the jealousies of the Great Powers prevented any concerted action for the enforcement of the conditions. These defects were sought to be remedied in the new settlement of igig.

Poland, Austria, Hungary, Rumania, Bulgaria, Yugo-Slavia, Greece, Turkey, Esthonia, Latvia and Lithuania all signed the 50 called Minorities' Treaties. By these instruments each people undertook to recognise all religious and racial minorities as fundamental parts of their nation, to allow them to conduct their own schools and practise their own religions, and to spend " an equitable share" in public funds for their educational and religious progress." These obligations " shall not be modified without the consent of the Council of the League of Nations"; they "constitute obligations of international concern" and are "placed under the guarantee of the

League of Nations." The system of protection thus devised has advantages in that it grants the League an acknowledged right of intervention and a method of accomplishing it, and in that it may remove the excuse by an outside Power of intervention on behalf of oppressed minorities-a fruitful source of war.

In order that such comprehensive protection of the rights of such minorities can be readily obtained, all the parties concerned must act in perfect good faith. The majority community must not seek to evade its avowedly unpleasant obligations; the minority community must learn that as well deserving the right of protection it also owes a duty to co-operate with the majority; and, finally, " the just and impartial arbiter " must in all instances be prepared to act without any reference to extraneous considerations. But when we see the Poles listening with tolerant contempt to arraignment of their treatment of racial minorities in the League, when we see the Magyars of -Transylvania opposing their Rumanian masters with unconcealed hostility, when, finally, we see the League complacently allowing the Arabs of Iraq to massacre the Assyrians, we wonder whether the problem of Nationalism, mysterious and insoluble, would not require another reconstruction of History at an early date.

# Hiking in the Highlands 

Debesh Chandra Das, b.a.-Ex-student.

THE spring-feeling was in the blood, infecting me with vague longings for I knew not what. From my window I had seen the pageant of the seasons pass, Spring with her promise and Summer her fulfilment. And as Autumn came with her ripe experience, I felt like leaving London and going anywhere. Anywhere off the beaten track.

I remember now that I had an ideal plan of spending a holiday in Scandinavia. But one fine August evening, I was walking up Princes Street in Edinburgh with a rucksack on my back, a new member of the Youth Hostels Association. Within the last few years youth hostels have sprung up in all parts of Great Britain. These hostels afford excellent facilities for touring through the country-side. People of small means, students and all sorts of young people take advantage of these hostels and spend a week or two walking. The hostels provided them with dormitories with straw palliasses, utensils for cooking and a common room. In Scotland you have to carry or buy your food-stuff from the warden who may live a mile off and do your own cooking. England is more civilised and you get bedsteads, articles of luxury and cooked food. Indeed you may expect electric lighting and tap water. But Scotland is more primitive and the little burn that runs by the hostel is ready for your service. A real enjoyment and a great fun to carry your food-stuff all day long, reach some hostel of an evening, prepare your own food, slip into your sleeping bag on the palliasse and clean your own stuff. In the morning take a good breakfast of simple potatoes and eggs, a rare luxury this, clean the room and leave the hostel hiking until you reach another in the evening. Now I am a hiker in the full sense of the term, so Edinburgh does not interest me much ; nor does even Scott's country. So I buy extra celluloid pots and cups though the rucksack is bulging out and move out of civilisation. Off the beaten track!

Now we are three. We take the train to Akhnashellakh, a name no decent student of geography will care to know. As we pass through the Grampians our interest grows; I feel that every bend of the railway is bringing me nearer to the land of kilts. The zigzag railway cannot continue for ever. In the desert one may be lured by
what one thinks the smell of the oasis; but here from the train I can smell the Highlands as the wine-coloured heather sways gently on the slopes of the hills. From the window as I sit I can see them. Not the stern and wild bens, but hills, soft and purple-clad even in the distance. As we get down at the station and walk a mile down the slope to reach the hostel, we visualise the climbing that is in store for us next morning. Our hiking proper starts from a place where there are no press reporters. But we need none, as we shall find out later.

A wet misty morning. The winding path flings itself round the shoulders of hills after hills, rising continually on in naked grandeur. On the left is a steep cliff ; in the autumn afire with rowan berries and the scarlet heaps of unknown flowers. On the right is a deep gorge with a bed of bracken which a few days later will look yellow and bronze. But we are walking fast and leave behind the last traces of human dwelling. It now rains but we feel intolerably hot. So we take off our coats and put on the raincoat over the none-too-civilised shirt and short. The path now grows steeper; its windings more crooked, its surface flintier. I forget that we have fifteen miles of such path to cover and at every bend expect a flat path. Only an hour of walking and I am cursing my rucksack. What is the use of this piece of loaf, this tin of fruit salad or this pair of grey bags if the bearer fails to enjoy the burden? What pleasure does he find in heavy articles? Is there any Highland-bred horse-no, he is thinking of those wellbroken high-bred ones-waiting for him? Or an automobile of any sort?

The hostel at Slattadale on Loch Maree. The sky has partially cleared up and the fleecy clouds are moving away. The limpid waters of the lake weave fantastic forms in the shimmering light. What primeval wildness on the hills on the other bank, what sombre solitude! And what ethereal shivers pass from my tired feet dipped in the water straight on to my head. I magnify in my mind the achievements of this first day of hiking. We have climbed hills that take some knowing, lonely, forbidding, almost unmolested in their setting. I feel thrilled when I think of my grand plan of covering the Highlands, the Hebrides, and the Lake districts as well. Many places I shall visit, places yet untrodden by any Indian student before. The very idea tickles me.

Evening is the time for getting to know one another, the fellowboarders of a night. Here is Professor C. of Edinburgh, a venerable gentleman of experience, with his wife and two children who, like Lucy, trip along as they walk. Little Gwen's impish smile radiates
through the room, a common room and a kitchen in one, as she recites-
'Tis merry, 'tis merry, in Fairyland
When fairy birds are singing, etc.
and finds her brother David, a Goliath for a young boy, sitting alone unnoticed. The sister has scored over her learned brother who cannot find a patient listener to his stories of Mary, Queen of Scots. For here is a burn near by, and on the bank, as Gwen assures us, fairies once used to hold their revels which she, herself one of those fairies, is going to describe. The Professor reveals a page of his youth when hiking was not a rage and when he was condemned by people for spending the honeymoon hiking. Of course, these youth hostels were not in existence, and the Highlands were, as they are still now, more or less a game preserve for English peers, American millionaires and Indian Maharajahs. The landlords forbid the few farmers that are to take guests for the night and the hotels are very expensive. So these far away lonely tracks have only recently been opened to access by the Y. H. A. In his old age the Professor has again come out hiking to re-live his honeymoon. A man of ideas, this professor of medicine. But we must not forget Bill who is a storehouse of songs and stories. A youth of delicate appearance, ready to serve you his own potatoes and pet songs when they are needed most, how could we know him to be a dour solicitor in a city noted for its legal acumen? In one corner sit two Scotch youths, fast friends indeed, as they are not of the same profession. They demand for an Indian song. Instead we sing in chorus

My bonnie is over the ocean, My bonnie is over the sea, Bring back, O bring back, O bring back my bonnie to me.
But they do not want an Edinburgh song. So they have an Indian one, a love-song of Tagore which suits neither the place nor the singer. "Ah, then, you Indians, too, can love?" "Can't we? Ask your bonnie lassies; they know better . . ." I feel an appreciative tap on the shoulder. It is about half past ten now and by another half an hour we must go to bed. In come the three girls from Dundee with their bright new kilts and merry laughter which induces me to doubt their credentials as genuine hikers. Suddenly I also feel like buying a kilt in the next village we pass through and looking a fullfledged highlander. Ah, those bright tartans! But not the

Macdonald one which may have a political colour. Now Father Wisdom in our Professor asks me not to buy one, kilts being the only unfailing proof of one's foreign origin. Fancy! A highlander, and not with a kilt? Oh Romance, where are thy apparels?

Scotland believes in personalities and lives on trading in their names. Anywhere one may go in the borderland, anywhere not beyond the range of char- $\mathrm{a}-$ bancs, one is sure to find every church and cottage and muddy lane associated with Scott. Round about Edinburgh Mary, Queen of Scots, reigns unchallenged and will continue as long as Scotland lives. As my path gets narrower and more winding and opens out new vistas magnificent in their stretch and charm, I instinctively fancy so many romantic stories hanging over this smiling country-side. Here I feel the pervasive personality the Highland clans all put together, and the memories of the individual clans seem to press heavy over the calm blue so peculiar to this mountainous country. Many a dark tale is assaciated with this part of the world, for it was not always the deer and the game-bird that men hunted over the purple heather stretches ir the dense wooded slopes. The Highlands I see now are already getting domesticated; and along with the spirit of the deer, the whir of the glouse and the bleat of the sheep, occasional motor horns break the silence. At the same time, over all the onslaughts of time prevails the Highlands' association with Bonnie Prince Charlie, their generous chivalry for a lost cause. Even now the rugged rustic's imagination flies with the beaten hunted prince with a price on his head as the native sings

> Royal Charlie's now away
> Safely ower the friendly main;
> Mony a heart will break in twa, Should he ne'er come back again.

> Better lo'ed you'll never be, And will ye no' come back again?',

Meanwhile I find out that a new personality has appeared in this romantic region. Amidst the loneliness of great hills and the solitude that lies like a lullaby over the luxuriant woods and glistening lakes, word has passed on round the country-side, informing the people of the adventures of the Indian student. Nothing perhaps has stirred them so much since the 'Forty-five. One day we are taking a luxurious lunch of bread and butter and fruit salad and discussing how three girl-hikers outwitted us, the night before, by booking in advance the eggs which were yet to be hatched on the morrow.

Suddenly a hiker emerges from the bush and approaches us crossing the singing burn that croons away to itself in a familiar undertone. He has heard a lot about our party and our movements and achievements. Against the colourful background of enchanting hills and heathers, we move in a mysterious way. So one day when we try to cook Indian khitchuri and it gets a bit burnt, the smell spreads over the whole glen; and when we are climbing twenty miles away, two sisters, companions on the same way, are found keeping in touch with the latest sensational news of the land.

A fortnight later, Flora Macdonald calls us and we cross over to Skye, one of the isles in the scattered Hebrides. The mysterious shadow of the misty isle throws a spell over me as deep as that thrown on Wordsworth's Solitary Reaper by the island's far-off song. But the glen of Sligachan lies dark and dreadful against the background of the Cuilins, the most difficult of the British mountain ranges to climb. We are under a hallucination; we have spent a whole day on the desolate shores of the Atlantic in the tiring search of a neolithic tomb and a canal of the Vikings. Naturally the Cuilins fascinate us as we climb up their jogged shoulders. As shadows lengthen, beetles whine amid the peat-reek, and even the occasional isolated carins get scarcer we feel that the Cuilins are something that can be seen, touched and even conquered but never understood. This Gaelic world is not ours.

> 'From over the sea to the Skye'
we go as casual travellers and as such we shall be, however long we may stay there.

The hostel at Uig is a pretty little bungalow with a stage-like balcony in the common room. There a shadowy boarder stands in his kilt and summarises in himself the whole history of the Highlands. He has come to the Hebrides to take part in the annual Highland games here. His ancestors had fought with Bruce and fled with the Young Pretender. He serves to preserve the link between the two lands on the two shores of the Sleet of Sound. But where is he now? He vanished deep down the bay of Uig which glistens with moonlight; and the silver band is slanting towards the water, to be up again with the call of the grouse in the misty morning light. No night this to be abroad. Let me sit down in kitchen and be a palmist for the evening. A German has heard so much of the Yogis and he readily accepts my word that he is going to fall in love before he leaves the island. Feminine credulity, as all the world over, readily plays into the hand of the palmist, and one by one girl hikers approach the Indian student
respectfully and have a look into their future. One will be a Narcissus and another is already in deep love. They are satisfied no doubt and may remember the readings long after they have forgotten the ghost stories of Skye. Now comes the old warden of the hostel and tells of a palmist who, since the days of Fingal, has been the greatest palmist, indeed greater than this young man. I nod and agree ; and highly encouraged, the youngest old man I have ever seen gives out the secret stories of Skye which other people have hidden away in reticence. Strange stories, rich with the romance of forgotten deeds which no man can trace and no fairy repeat. Weary and wind-blown for the whole day, I now feel drowsy in that half-dark room as nymphs rise up from the bay and ghosts come down from the hills and nestle close to me in a weird way of their own.

# Neutrons and Positrons 

Romaranjan Bhattacharjya-Fifth Year, Chemistry.

THE Die-hards amongst the followers of Dalton must have been perturbed when the Daltonian atom was broken down into Proton and Electron, but they will probably be shocked to learn that besides these, two other fundamental particles of matter have been discovered, viz., Neutron and Positron.

Neutron was discovered in 1932 by Dr. J. Chadwick of the Cavendish Laboratory by bombarding elements like Berylellium with Alpha rays when particles, having a unit mass and possessing no electrical or magnetic field, were shot off with great velocity. These particles are called Neutrons. Twelve years ago, Lord Rutherford imagined the existence of such a particle and described the properties that it would possess and to-day we see that his dream has been fully realised. A neutron consists of one proton and one electron. As the electron is $1 / 800$ times the mass of a proton, the neutron has practically the same mass as that of a proton. The normal Hydrogen atom also consists of these two particles, viz., one electron and one proton and has also a unit mass, but it differs sharply from the neutron in the fact that the Hydrogen atom " wears its electron as a bulky crinoline which confers on it an immensely greater volume. The neutron, on the other hand, may be said to have taken the crinoline off, folded it up and put it in its pocket. We may describe the partners (electron and proton) in neutron as clasping one another to tightly that the electron ceases to be a fender; none the less as a unit of negative electricity, it still survives to give electric balance to the pair. Though so close together, the two constituents of neutron remain separate and distinct, parted by nearly as many million volts as in a normal Hydrogen atom.''* Thus we see that if Neutron could be supposed to be an element, then, according to modern conceptions, its Atomic Number would be zero as it has no planetary electron. It is the unit of mass. Being extremely light and tiny and having no electric charge, it possesses the unique power of penetrating matter much further than any one of charged particles that are generally used

[^21]as the bombarding agent; because these charged particles by being knocked on all sides by the electrons and protons that make up the element, soon lose their energy and come to rest. A neutron, on the other hand, being uncharged, is not attracted or repelled by the particles near it and so penetrates much thicker strips of matter. Neutrons are now believed to be an essential constituent of the Radio Active nuclei which are supposed to be made up of three well-defined regions-firstly, the core consisting of electrons and protons surrounding which there are electrons and a small number of charged nuclei of small mass probably from the disintegration of the core of the nucleus and, last of all, a layer of neutrons. Neutrons, like electrons, can jump from one quantum orbit to another and thus give rise to a kind of radiation called hard-gammaradiation, the frequency of vibration of which depends upon the difference in the quantum contents of the orbits.

The history of the discovery of positrons is one which will interest anybody.* In 1930, Dirac found that the Theory of Quantum Mechanics gives an equation for the state of energy of an electron, the roots of which have a positive and negative value. The positive root referred to negative electricity, but the negative root was disregarded. Dirac assumed the latter to refer to protons. He assumed the negative root to apply to several " holes" in the universe which he supposed to be made up of electrons and few such "holes" which, he showed, would have the properties of a unit positive charge. But the whole theory seemed to break down as these " holes" could not be Protons. In 1932, C. D. Anderson of Pasdena, on examining the photographs of the tracks of the particles obtained from gamma-ray bombardments in a magnetic field, found that along with the tracks of the protons, several tracks were noticed which may be due to particles positive in electrical character but analogous to electrons in other respects. These apparently positive particles were argued by some to be merely. electrons going backwards; but Anderson disproved this by placing a lead plate on the path of the particles and photographing one of the light positive particles as it passed through the plate. Its path was more bent when it emerged from the plate than when it entered, showing that the particle was not moving backwards. Then in 1933, P. M. S. Blackett and G. P. S. Occhialini found that when a piece of lead was bombarded by a stream of neutrons moving with a high velocity then along with electrons and protons, particles were

[^22]ejected, which had the mass of an electron but carried a positiv charge. It has been christened tentatively as a Positron. Thus wi see that Dirac's "holes of the universe" as positrons and no protons. It was believed even in 1932 that the smallest unit of : positive charge is a proton, but in 1934, we know that particle lighter than proton and yet carrying a positive charge can $b_{1}$ obtained. Hence positron and proton is the unit of positiv electricity. Positron has been obtained in another way. Chadwick found that the Cosmic rays from space on striking metallic surfaces in their rapid journey earthwards disrupt the atoms into positrons and electrons. This property of the Cosmic rays, has been explainec by Curie and Joliots by assuming that the Cosmic rays, which consist of light energy or protons, are materialised into positive and negative electricity. This is called Materialisation of Light Quanta. Recently Prof. Saha and his students have detected such materialisation in the case of gamma-rays from certain Radio-Active substances.* Diac has shown that the average life of a positron is only a fraction of a second, because they combine very soon with an electron producing two protons. The exact role that it plays in the building up of atoms is yet unknown.

Thus we see that as yet only four particles of matter are known, viz., Electron, Proton, Neutron and Positron. The sticks-in-the-mud amongst the scientists are already crying halt to the march of the Ulysses amongst them. They claim to have exhausted Nature's Dome of Immensity. But time and again Nature has beguiled man. Such was the state of things in the age of Dalton when atom was the ultimate unit of matter. Such also has been the case with us and who can say that our present conclusions will not be turned down by the results of future researches in these fields? In fact, is it altogether " nonsense" to suppose that besides the four fundamental particles of matter hitherto known, there is one more particle which is still eluding the grasp of the scientists? This particle would be analogous to proton in its mass, but would carry a negative electricity and would have a complex structure consisting of a neutron and all electron. It may be said to be the " Negative Proton."

[^23]
# The Quintessence of Fascism* 

Kalidas Lahiri-Third Year, Arts.

THE opening decade of the present century market the dawn of an era out and out revolutionary in theory and practice. In the political field, it began by throwing a hot challenge to the oversimplified conceptions of purely Parliamentary Democracy. The socialists and pluralists in the early twentieth century soon led the way. The pluralists denied the principle of state-supremacy and the socialists' aim was to do away with it and establish a class-less society instead. The Trade Unions, which the Victorian jurists were content to regard as merely tolerated creatures of the state, soon came to seize power claiming a right to act on behalf of their members and to strike even in defiance of the state's prohibition. In the years before the War of igI4, a wave of labour-unrest swept over the European countries. Syndicalism in France and Italy, and Guild-Socialism in England were all taking a spirit against the traditional concepts of Parliamentary Democracy. The War took Europe at a time when the new ideas were still in the stage of being formulated and made the basis of positive theories and methods of action. For the time being it seemed to interrupt both the process of thought and tendencies towards positive actions in the economic field.

Post-War Europe had been a laboratory of new experiments in the science of politics. There could be in fact no real return to the old conditions, for the War radically altered the political and economic configuration of the world. Before the War ended, Russia had led the way, passing in her two revolutions of 1917 from the Czarist Autocracy to the Dictatorship of the Proletariat. Europe plunged into an orgy of constitution-making, when statesmen could hardly know what it was that they were going to make. With the single exception of Russia, all the states fell back on the old support adapting their pre-War constitutions in a secondary way by a wide extension of the franchise. Fascism that came later meant a far less deviation from the older forms than Communism, and sought to change the political organisation of society without altering the economic

[^24]system. Hence the transition from Parliamentarism to Fascism could be effected with far less disturbance of social equilibrium.

In terms of methodology, Italian Fascism has much in common with Communism. Firstly, it insists on activity as the basis of citizenship rather than the idea of voting citizenship of Parliamentary Democracy. It attempts to exclude all hostile elements from sharing any place in the political sphere. It further desires to co-ordinate under the command of the state all active forms of voluntary associations and all important forms of communal life. Finally it wants to give Fascism the predominant and all-absorbing mood in the state. Over these details, the methods of Fascism and Communism prove alike. But the ends which they seek to serve are radically different, being fundamentally based on two essentially conflicting concepts.

To the Communist, the underlying reality is the unified class and upon class must the foundations of the new society be built. But for Fascism the underlying principle is the Idea Nazionale and the end of politics is to make the nation great and to devise a political organ which shall be exclusively expressive of the entire national life. But the clash between Communism and Fascism is most violent, because nationalism is, for the Italians and other European countries, different from the nineteenth century conception of something to be won by victory over foreign oppressors. It is in this generation a thing already in form, but needs to be made flesh and guarded against the ideas that are detrimental to the health of the state.

To trace the Fascists' way to triumph we must date back to the dawn of the new nationalism in the early part of the twentieth century. Nationalism became in the twentieth century the philosophy of new authoritarian groups aiming at the destruction of Parliamentarism. Nineteenth century nationalism was an enemy to old autocracies, and its constant demand was to bend the absolute monarchies to grant constitutions embodying the principles of democratic self-government. In Mazzini's nationalism, it was mixed with strong elements of internationalism, and Mazzini may be fairly regarded as a forerunner of the modern concepts of internationalism as emobodied in the League. But Cavour was a very different man from Mazzini, and the nineteenth century was far more a la Cavour than a la Mazzini. Wherever nationalism gained ground and was successful in securing responsible Parliamentary institutions in a country, it soon became expasionist and imperialist as well as merely nationalist.

Until the Great War these tendencies developed without much upheaval in the constitutions of the state. For, it was found that

Parliament was nearly as amenable to the new philosophy of economic imperialism as the older autocracies. The latter part of the nineteenth century marked the advent of a new phase of imperialism which was in due course to prove fatal to the liberalism of the nation-state. The more successful nationalism was in consolidating the institutions of the states in which it developed, the less liberal it grew, and tended to ally itself with aristocratic and authoritarian elements in society. While the gradual conversion of the liberals to authoritarianism and imperialism was taking place, the older aristocracy had already begun to be nationalistic.

The Junkers and militarists, who had lost their powers, turned to work out the parliamentary organ to their own ends. They were successfnl to win over the industrial magnates, bankers and traders to their side. The new nationalism thus brought about, though not accidentally, the coalition between the old aristocrats and the new plutocrats. When this new coalition was confronted by the fait accompli of the democratic Parliamentary State, nationalism, which had been in the nineteenth century a force on the extreme left in European politics, was definitely after 1918 a force standing on the extreme right. The Junker attitude was at bottom a class or racial attitude rather than a national attitude. It championed the cause of the national state, not because it was national but because it meant a class and race-privilege, and it withheld any real feeling of loyalty from the new Republics established on the ruins of the old Empires. It was nationalist only so far as it could brook no external interference with its right to struggle for the old absolute authority it had lost ; and again inasmuch as it saw the merits of the militant type best suited to build the autocracy and aristocracy as the pillars of the state. This new nationalism finally meant any forces which tended to overthrow the democratic institutions without, and at the same time affecting a blow at the central position of economic privilege.

In Italy Mussolini and his Fascists won over to their side, and used for their own purpose, the remnants of Conservative Nationalism, but they were careful enough not to let their policy and programme anyway dominated by their conservative allies. In the same way, the German Nazis made their government in coalition with Herr von Papen and Herr Hugenberg. But a few weeks of Hitler-government showed the exclusive preponderance of the Nazis. Moreover, in Germany, as in Italy, the nationalists were very soon cheaply dispensed with, their separate existence annihilated, and they were merged into the new movement.

Italian Fascism of the ex-socialist Benito Mussolini is the final offshoot of the Civil Wars that raged in post-War Italy. Parliamentary government has there been specially weak, the doctrine of socialism in its post-War programme proved itself to be utterly impotent. It was indeed a period when Italy had no government powerful enough to enact laws or to enforce them. The socialists were only so far able as to paralyse the government, but they had not sufficient ability to take charge of it. They hesitated, refusing to work the old system, and not daring, in spite of their sympathy with Russia, to institute the new. They took no decisive course of action and floundered helplessly. For a time it seemed as if the situation would decide in favour of the Popolari, the Catholic party of Don Sturzo, but they too had no clear-cut conception of the future programme, and shrank back. When the socialist impotency was manifest in Italy, when the Popolari of Don Sturzo was unable to take up the government, the road was left clear for Fascism, to which all manner of discontented elements began to have recourse-from Syndicalist on the extreme left to militant and militarist nationalist on the extreme right. Italy was now for any strong man's for the taking and the Dace stepped forward.

Fascism in the meantime had been growing fast. D'Annunzio's Fiume adventure (September, 1919) with its fanciful devising of the constitution of Carnaro, and its appeal to Italian irredentism and disappointment with the spoils of the War brought in a host of new recruits. D'Annunzio's dramatic seizure of Fiume and his continued occupation of the city in defiance of the Allied Powers kept the excitement at height throughout 1920. When finally he surrendered the city to Italian regulars in I92I and his forces were disbanded, they were soon absorbed into the body of the Fascists. Thereafter Fascism spread faster still ; Mussolini founded in March, J919, his first Fascio di Combattimento and it was not long before the King went over to Fascism, and the Fascist march on Rome registered the passing of the powers into the hands of Signor Mussolini.

Fascism was at this stage rather a call for action than a theory or a programme. In the words of the Dace himself, 'When, in the now distant March of IgI9, I summoned through the columns of Popolo d'Italia, a meeting at Milan, I had no specific doctrinal attitude. . . My own doctrine, in this period, had always been a doctrine of action. . . . . In the great stream of Fascism are to be found ideas which began with Sorel, Peguy, and with Lagerdlle
in the Mouvent Socialiste.'* It could hardly be defined as a co-ordinated system of positive doctrines, but it was mainly guided by several negative principles. It hated Communism, and all forms of internationalism and class-warfare. It hated Parliamentarism which it denounced as the cause of Italian disintegration. It hated Pacifism, because it set limits to the range of Italian ambition.

Meanwhile, Parliament, with a handful of Fascists among its members, soon found itself dominated by the new administration. Against the will and opinion of the majority it passed the electora law of r923, knowing that a refusal on its part to acquiesce would leac to its forcible dissolution. It suited Mussolini to cloak his assumption of dictatorial powers as far as possible in constitutional forms, anc Parliament rather than provoke a more definitely revolutionary situation, meekly did whatever he and his Fascists desired,

Fascism, as a theory and political policy, rests upon the idec nuzionale. The theory of Fascism has grown up gradually, follow. ing its practice rather than giving rise to it. On the surface, Fascism may be regarded as an opportunist movement created by Mussolini for his personal ends, and brought to power by his personal genius for focussing contemporary discontents. For the revolutionary and aggressive economic measures advocated by the Fascists in 1919, and the programme, which the Fascists set to fight, marked a difference that could hardly be conciliated, But in spite of these apparent contradictions, behind their opportunism there is a real element of continuity, and it is upon this element, rather than upon their opportunism, that their power is fundamentally built. For Fascism bases itself first and foremost on the idea of the nation being the ultimate moral end. To the nation all things are to be subordinated and in and through the nation alone they can seek for their self-realisaton. Men owe duties to the nation, but the nation in turn owes none. In its dealings with other nations, it recognises no higher authority, and in an almost Neitzschean spirit, it seeks self-expression and expansion. It soon took the form of a mystical Hegelianism made up of the elements from the constitution of Carnaro and Philosophie des Rechts. This means imperialism without, for the nation would require room to breathe and expand, and accordingly the military virtue will be nursed by Italian diplomats. This does not necessarily mean that Italy always wants to go to war with some nation or other. For Fascist Italy preserves, among the most aggressive

[^25]policies, a fair share of practical common sense. It means that Italy must always think of war as a possibility and must never take up an attitude of pacifism, even when she wants to keep peace.

The idea and policy of Fascism are commonly spoken of as the idea and policy of the Corporative State. The Fascist State is not composed of so many individuals, but of those individuals grouped according to their several corporations through which they are related to the life of the state. According to Fascism, classes do not exist as such, but only as corollaries to the distribution of functions in the national state. The national idea means, in addition, concentration within, for the whole life of the society must be centred and organised around the nation-state. In particular the Fascist State would not tolerate any organ of action or expression that does not recognise the ultimate moral being of the state, and co-operate in its realisation. The Fascist State recognises Trade Unions provided that they are built in its own image, and repudiate all connections with Marxism and internationalism. The Trade Union and the Employers' Association thus become an integral part of the Fascist State, each with a definite responsibility, both subject to the controlling authority of the state; and no conflict of group interests should be pushed to the point at which it threatens the security of the state. Compulsory arbitration in industrial matters is therefore an inseparable part of the Fascist system. Not content with the existing systems of the Socialist or Communist Trade Unions, Mussolini and his colleagues destroyed them and replaced them by Fascist Trade Unions. Much working class discontent remained and remains to-day, but it was left reorganised and without means of expression. The Fascists then partly achieved their end of making Trade Unionism an integral part of the new state.

Fascism took over from Syndicalism or Guild Socialism something of the idea of self-government in industry, but it then started to make use of this idea in a way quite inconsistent with the Syndicalist or Guild Socialist aspirations. Both Syndicalism and Guild Socialism wanted to abolish class-distinctions and contemplated the total disappearance of the employing class, and stood for the conduct of industry through self-governed corporations of workers by hand or brain, with the total suppression of private ownership and the profit-motive. Fascism, on the contrary, seeks to stabilise class-distinctions and sets out to maintain the principles of private property and production for profit.

In dealing with the question of private property and private exploitation of the means of production the Fascist contention is that
the State should only interfere with the working of the industry within limits to ensure the stability and success of the social system as a whole. In fact, the Fascist State had been led to intervene to a great extent not only in regulating the relations between the workers and employers under a system of compulsory arbitration, but also in the actual conduct of industrial enterprise. It has reshuffled the banking system with a far greater degree of public co-operation, and it has established, for the financing of Italian industry, Instituto Mobiliare Italiano as Public Utility Corporation under the supervision of the Ministry of Finance. This new body set up in November, 193I, came into being with a motive to relieve the Banca Commerciale from the burden of large holdings of industrial shares. These shares were transferred from the bank to a new company the Societa Finanziaria Industriale which was financed by the new Instituto Mobiliare. The resources of the Instituto were drawn partly from Italian Post Office Savings Banks and partly from the private concerns which in turn owned a majority of shares in the Banca Commerciale. The Fascist party thus combines an insistence on the ultimate right of the State to dominate over all matters, economic and social. Drawing its chief support, as it has done in the past, from the petite bourgeoisie and the small farmers, Fascism was clearly bound to insist strongly on the rights of private property and of the retention of the private enterprise as the basis of the new state.

So far for the social aspect of the Fascist regime. If we turn to the side of its physical political policy, we are sure to be confronted by a programme wholly dominated by the social Fascism. Politically the control exercised by the Fascist party over the country is complete. The electoral law of 1923 set up a totally new system of government. The Parliament does indeed still exist, but it has been shorn of all its powers and made impotent to act as a separate body independent of the Fascist colour. In fact, it has become a subordinate part of the Fascist machine-a mere registering body for decisions arrived at elsewhere, and occasionally a theatre for the Duce's pronouncements. The real power rests with the Fascist party itself and the real legislature to-day in Italy is the Fascist Directory appointed by the head of the State. The Grand Council, to all intents and purposes, chooses the Parliament. From the nominations thus gathered in from the functional bodies, the Fascist Grand Council then proceeds to select 400 members, and these 400 then form the national list of candidates for Parliament put forward with the approval of the Fascist party. No other party is allowed to nominate candidates, and the entire list of electorate is then called upon to vote for or against the whole list of

400 candidates en bloc. In the election following the adoption of this system about 90 per cent. voted and 98 per cent. of those who voted, voted for the Fascist list.

Many critics of the Fascist regime in view of the policy of opportunistic violence actually pursued by the Fascist party in its march to power, condemn Fascism as nothing more than a creed of violence and personal ambition dressed up in the borrowed garments of a belated Hegelianism. But in spite of these adverse criticisms, the Fascist State is itself conscious and has itself a will and a personalitythus it may be called the 'ethic' state. If every age has its characteristic doctrine, there are a thousand and one signs which point to Fascism as the characteristic doctrine of our time. For, if a doctrine must be a living thing, this is proved by the fact that Fascism has created a living faith; and that this faith is very powerful in the minds of men. In the words of the Duce himself ' Fascism has henceforth in the world the universality of all those doctrines which, in realising themselves, represented a stage in the history of the human spirit.'* To the international Utopians, our reply is that when the League of Nations means the rule of the stronger nations, it is best for the minor states to inculcate this aggressive nationalism of the Fascists to safeguard their rights.

We have omitted from this account the new Fascist (?) regime in Germany and the so-called Fascism of Sir Oswald Mosley in Great Britain. But those are different tales altogether, and require separate treatment.

## On Journalism

## Khagendranath Das Gupta.

THERE can be no greater tribute to the value and work of journalism than that which was paid by President Roosevelt the other day when he addressed an assembly of journalists. A year ago, a care-worn and poverty-ridden world, almost breaking down under the load of intolerable agonies, put Mr. Roosevelt into the exalted and responsible office of the President of the United States with the cry for a "full dinner pail" and a "fat pay envelope." President Roosevelt reciprocated the emotion that swept him into the White House by undertaking immediately a drastic Economic Recovery Plan, which for one year in actual working, has staggered the rest of the world by its boldness and vigour. In his efforts to improve the depressed financial conditions of his country, he has marched relentlessly on against enormous odds and age-old traditions with the strength of almost a Superman. Yet this man with an unbounded confidence in his own wisdom appealed for light and help in the shape of meritorious criticisms of his policy from the journalists. This is practically the most valuable part of the work of journalism and so President Roosevelt's invitation to journalists for helpful suggestions in his difficult task of economic recovery of his country has shed a great lustre on the whole profession.

There is no denying the fact that a newspaper is nowadays predominantly an organ of public opinion. It criticises the day-to-day administration of a country, keeps the people informed of what is happening in countries far and distant and educates public opinion in all possible ways. It helps in countless ways right thinking and the formation of right perspective. It moulds popular opinion so as to suit the needs of changing circumstances. It interprets social, political, religious and educational tendencies and rivets the attention of the people on all matters that are vital to the well-being of a country. In all civilised countries of the world, the journals play an important part in giving direction to public opinion. Thus " the dailies" and " the weeklies " serve the country better than perhaps any other single nonofficial institution.

It is not possible, within the limited space at our command, to give details of the rise and growth of journalism, to give a history how
from the position of shy, printed pages stealing upon the world with diffidence, the modern Press with pomp, grandeur and an effective voice in the administration of a country has sprung up. The nature and dimensions of the progress of journalism from weakness to strength may be apparent to us when we remember that to-day, according to a school of critics, journalism is the literary instrument of expression in England. Literature through the ages has taken various forms to express itself and at present in the English language it has taken the form of journalism ; of course, we do not forget that the claims of the drama to that title are also equally great.

A newspaper ordinarily supplies news of events happening all over the world. For this reason, the more the isolation of the past is breaking, the needs of journals are being more increasingly felt. To-day no country or nation is prepared to remain ignorant of what is happening elsewhere, and so the development of journalism has been an astonishing phenomenon in recent years. When the stress of modern economic life is tending to make the whole world a single market, journals are possibly the best source, if not the only source, through which international commercial conditions can be made known to the people day by day. Thus journals as a news-agency serve a very great purpose and help to destroy the barriers of nature between country and country.

Journals are also an instrument of international intellectual intercourse. From them we are able to have an idea of the currents of thoughts obtaining in remote countries, through them we can feel the pulse that is beating in other parts of the world. It is true that this knowledge can be gained from a study of the literature of different countries, but the study of the literatures of foreign peoples is often the privilege only of a few. Journals are within the reach of even the common man's intellectual and economic resources and so serve a very useful purpose in promoting intellectual fellowship among different communities.

The value of journalism is nowadays realised by all civilised peoples and so we find that in almost all independent countries an atmosphere has been created in which the profession can thrive and prosper. Freedom is the most essential condition for the progress and prosperity of the profession and therefore in many countries the freedom of the Press is a very real matter. The Fourth Estate is given so much freedom that it need not fear anything so long as it criticises peoples, policies and administrations with loyalty to truth. The British Press, which is to-day the admiration of the whole world, could not have achieved any distinction, had it not been favoured with the freedom conducive to its
greatness. We shall be able to appreciate the influence of a free and efficient Press when we remember that The Times in the rgth century was responsible for the removal and restoration of a large number of ministries in England. That influence The Times does not possess nowadays ; it has gone for several reasons, but the waning of its influence is certainly no reflection on the prestige of journalism which is rather daily increasing.

The right conduct of a newspaper, from the nature of its functions, entails serious responsibilities upon those who are in charge of it. In fact, the greater the dignity of a profession, the more serious are its moral obligations to the outside world. Let us try to point out certain canons of journalism, some principles which it is the duty of every journal to follow.

One of the first principles that journalism should observe is respect for truth so far as the publication of news and events is concerned. A journal need not be impartial in its outlook, it is free to have its fondness and bias for particular men, policies and administrations. But it certainly has no moral or legitimate right to change, alter or distort facts for that reason. As a great journalist, the late Mr. C. P. Scott of the Manchester Guardian, once remarked, " Comment is free, but facts are sacred." That is the greatest essential of journalism, it should respect truth and nothing else. It need not be even honest in its convictions, but it should be true in its presentation of facts. Moreover, misrepresentation of facts, however able and fascinating, does not ultimately produce the desired effect. The angry attacks of Lords Rothermere and Beaverbrook on Mr. Baldwin's leadership of the Conservative Party through a most formidable Press at their back have so long been condemned to futility because of their indulgence in the undignified habit of circulating lies and half-truths about his activities. We admit that facts are always bare, spare and unromantic. Naked facts seldom thrill, very rarely create a sensation. Therefore there is a tendency on the part of certain papers to add an amount of polish to stark facts in order to make them interesting. But this practice leads to the sacrifice of a great journalistic principle at the altar of mere sensation and cheap effect. There is also a great danger lurking against the observation of this principle (respect for truth) in the existence of a commercialised and monopolistic Press in some countries which has made the newspapers the mouthpiece of vested interests. Such newspapers run by Capitalists and Commercial classes often change or distort facts hostile to their purpose. It is the merest commonplace of life that if you pay the piper, you can call the tune. Money has enslaved skill in
many departments ; even the field of journalism stands threatened with this menace. But journals even serving money, and for the matter of that, particular policies liked by those money-makers need offer no explanation for their conduct so long as they do not interfere with the sanctity of facts.

The next great principle necessary for proper journalism is a fearless and independent outlook. A journal should not on any account sell its birth-right to hold any opinion it likes about matters which are public. It is an educator of public opinion and so it must have the courage to focuss public attention on all matters rising above the frowns of arrogant authority if need be. Politicians all over the world fear influential and important journals and the fear they rouse is a great glory of journalism. There is the vicious practice in many countries of buying off of influential journals by politicians in order to seal their lips against them. The offer of a large sum of money to poor journalists is sometimes too great a temptation to resist. But as a great journalist has observed, " Directly a newspaper Kow-tows to authority, seeks favour or dips the editorial pen in butter; it becomes a despised sheet unworthy of the highest traditions of journalism." Journalism by its independence of outlook and fearless criticisms of policies has wiped out of the face of this world many evils. In the West, many journalists have suffered long and terribly to preserve the spirit of independence in their profession. The freedom of the Press, as we know it to-day, did not come all at once in any country, but the sufferings and sacrifices of many great journalists, living and dead, are at the root of that freedom of which we are so proud to-day. Every inch of that freedom had to be fought in order to be gained against the demoralising efforts of money and influence to coax the journals into a state of servility.

The third great principle of journalism is to try to give publicity to what is in public interest irrespective of other considerations. Influential people at the head of public institutions often try to hush up scandals connected with their work by bribing the journalists. Every good journal is expected to be able to resist this temptation. Many evils in the West have come to light only because of the persistent attempts of newspapers to make them public. As Mr. Wilson of the Pioneer once wrote, " In England from The Times down to the least provincial journal an attempt is being made almost every minute of the day to beat the secrecy with which Government try to surround themselves. . . . . Not a day passes in England without some secret documents coming out or all important Cabinet discussions seeing the light of the day." Often Governments have tried to put tempting
offers in the way of the journalists in order to know the sources of leakage of their secrets, but the journalists have rather preferred to go to jail than give the names of their reporters or correspondents. So this attempt to supply secrets to the public vital to its interest is a great virtue of journalism.

The calling of journalism is one of the highest and most respectable in this world. A journalist is a great servant of the public, the demands on his fund of intellect are very great, the sacrifices and sufferings expected of him for the cause of the public are not small. But it is as an intellectual prodigy that a journalist impresses us most. He must be able to burn his candles in different shrines. He has to dream with the poet, count the dollars with the financier, muse with the philosopher and coldly gaze at the unruffled face of nature with the scientist. Rightly has it been said that a journalist is the nearest approach to a Superman. What a successful journalist can achieve in the way of fame and distinction will be clear to us if we remember those beautiful and highly significant words of Prof. Laski about Mr. J. L. Garvin, one of the leading English journalists of to-day, " He has made his weekly thunderings almost a national institution." What influence a great journalist can exert in his time will be evident if we bear in mind that Lloyd George could not offer Asquith a seat in the Peace Conference after the conclusion of the last Great War owing to the opposition of the then editor of The Times.

# The Beginnings of Science Teaching in Hindu College 

G. N. Dhar, b.a.-Librarian.

IN the Introduction to the Presidency College Register (pages 7-8) mention has been made of the text-books used for study in the Hindu College in its earliest days. From a perusal of the list used in the Senior Classes in 1824, one cannot but entertain a poor opinion regarding the attainments of the earliest scholars. Tegg's "Book of Knowledge," Enfield's "Speaker," Goldsmith's " Geography " and Murray's " Grammar " were not surely calculated to give the most advanced pupils an adequate command over the English language, Neither could these books, and these alone, be expected " to extend their knowledge of History and Geography and to open to them a view of the objects and means of Science." Dr. Wilson touched this point (among others) in his first Report as Visitor. He animadverted on the unsuitability of mere extracts from literature for the upper classes, and advised that they should be made to peruse the best English authors in prose and verse. He also pointed out that "the young men did not advance beyond the simple rules of Arithmetic, and even vulgar fractions were above their attainments." Dr. Wilson was of opinion that a Mathematical Instructor should be appointed and that a small Library should be attached to the College. The General Committee, in forwarding this Report to Government, endorsed the views expressed by the Visitor, and observed that under the conditions prevailing, much remained to be effected before the pupils could be considered to have learnt all that might be taught them. It was determined that a series of English books should be published for the use of this institution at an expense of Rs. 49,376 which should be borne in equal parts by the funds under the control of the Education Committee, and by the School Book Society. A partial supply of books to the value of Rs. 5,000 was arranged for being immediately procured from England. Many of these were given away as prizes to the students.

Mention has been made (p. 8, P. C. Register) of a valuable philosophical apparatus having arrived from England for the use of the Hindu College. 'On the 3rd of July, 1823,'" writes Mr. Thomas Fisher (Searcher of the Records) in his Memoir on Education of Indians,
" Mr. J. H. Harington, then a Member of the Bengal Council, submitted to the Government a letter which had been addressed to him and the late Sir Henry Blossett by the Secretary of the British India Society in London, advising the transmission to India by permission of the Court of Directors of the East India Company, freight free, of an extensive philosophical apparatus, in order to its being placed at the disposal of the Calcutta Hindoo Sanscrit College, should the Committee of that institution have the means of employing a competent lecturer.
"The apparatus was accompanied by a considerable number of books on scientific subjects designed for the use of the lecturer and others who might have occasion to refer to them. . . . .
" The Governor-General in Council, on receipt of this communication, ordered the chests containing the apparatus and books abovementioned to pass at the Calcutta Custom House free of duty. They were accordingly delivered into the custody of Mr. James Thomason of the Bengal Civil Service until a professor or lecturer could be provided.
" The apparatus consisted, among other articles of minor importance, of the following:-

A complete set of Mechanical Powers.
A complete Whirling Table and Apparatus.
A complete set of Magnetical Apparatus.
Ferguson's Pyrometer Lamps, etc.
A Nine-inch Cylinder Electrical Machine with Appendages, viz., Insulated Stool, Thunder-house, Three Bells, Magic Picture, Air Pistol, Spiritual Tube, Copper Plates and Stand Head with Hair, Spider, Swan and Star, also a Universal Discharge, Press and Diamond Jar, and a Tin Fire-house.
A set of Eight Musical Bells.
A set of Saw-mills.
Models of Water and Forcing Pumps.
An Air Pipe.
A Gunpowder Apparatus.
A set of Weights for Copper Bottle.
A Fountain in Vacuo.
A Fork Balance.
Torricellian Bellows, Glass and Brass Tubes.
A Hydrostatic Balance.

A Galvanic Trough and Plates, together with-four improved Galvanic Batteries, complete.
A Finished and Complete Tellurian, Lunarium, and Planetarium.
A Brass Hemisphere.
An Improved Equatorial.
A Selenographic Twelve-inch Globe.
A set of Optical Silk String Models in Case.
A large set of Box-wood Geometrical Solids.
A large-sized Double Barrelled Air Pump and Receiver.
An Improved Table Chemical Furnace, together with a complete Chemical Apparatus for the same.
An Improved Gasometer, Tin and Glass Vessel.
A set of Stop-cock Apparatus for experiments on Glasses, Bladders, \&c.
Woulf's Glass Distillatory Apparatus.
A Mahogany Chest with 56 Phials containing Chemical Tests, \&c.
A Spirit Lamp and Brass Sliding Ring Stand.
An Inflammable Air-Lamp.
A Pneumatic Cistern.
A Glass Alembic with Head and Stopper.
A Mercurial Trough.
Evaporating Dishes.
An Improved Large Phantasmagoria Lanthorn with Slides
A Guinea and Feather Apparatus.
A Terrestrial 18 -inch Globe with Appendages.
A Celestial 18-inch Globe with Appendages.
Adam's Lectures, in 5 Vols.
Essay on Electricity.
A Glass Prism, Convex Lens, and an Opaque and Transparent Solar Microscope.
A $3 \frac{1}{2}^{\prime \prime}$ Achromatic Telescope with Tripod Stand and Appendages.
A set of 21 Astronomical Sliders.
Brand's Manual of Chemistry.
Ure's Chemical Dictionary.
Mackenzie's rooo Chemical Experiments ; together with several other Scientific Works.
" All the expenses attendant on the receipt, unpacking and packing and on the careful custody of the above-mentioned philosophical instruments and books were, by order of the Bengal

Government, charged to the East India Company ; and a salary assigned for 2 professors or lecturers on experimental philosophy so soon as a qualified person should be found to receive it."

At the request of the Managing Committee of the Hindu College, the General Committee of Public Instruction proposed to Government in a letter dated October, 1823, to engage a Lecturer on Natural Philosophy on an estimated monthly salary of Rs. 300. In case a competent person could not be procured locally, the General Committee recommended that it would be desirable to hold out an annual income of ${ }_{5} 500$, and invite a duly qualified Professor from England. The prospective Professor should, it was proposed, attend four days in the week from ro to 1 or 2 o'clock, and deliver discourses to the First Class students of the Hindu College, on the ordinary branches of Natural Philosophy, viz., Mechanics, Hydrostatics, Pneumatics, Optics, etc. The General Committee hoped that when the Lecturer should be qualified to hold his prelections either in Sanskrit (!) or in one of the vernacular languages, he would extend the benefit of his instruction to the boys of the Sanskrit College. The Government was sympathetic. Mr. D. Ross, who was originally Director of the Copper Mines in Cornwall and was then employed as the Mint Master of Calcutta, was selected for the post from among a large number of qualified candidates (among whom was Rev. Mr. Mack of Serampore). The Managers were apprised of the appointment in May, I824 ; and Mr. Ross commenced his first course of lectures on the 6th of July next. Within two months and a half he delivered eleven lectures, each extending over two and a half hours. Besides the Introductory lecture, the subjects of his discourse comprehended Properties of Matter, Laws of Motion, Mechanics and Magnetism. It appeared that the apparatus was faulty. The Visitor referred to this fact in his Annual Report, and dwelt on the desirability of making it more complete in order that scientific truths might be demonstrated by successful experiments. He noticed also the absence of books on the subject-matter of the lectures and advised that a small library should be attached to the class consisting of several copies of the most valuable handy text-books on General Physics.

The General Committee do not appear to have been pleased with the small number of lectures delivered by Mr. Ross. In the Report they submitted to Government in October, 1824, the Committee regretted that the Sanskrit College boys could not, as contemplated, share in the advantages that might be derived from these lectures. They, therefore, wished it to be clearly understood that the arrangement was only temporary and provisional, the question of making it
permanent to be settled later on, after due consideration of the results produced. Although the lectures continued to be delivered year after year, the subjects varying but little in their scope, scarcely any solid progress appeared to have been made by the scholars, and "some of the most advanced students seemed to have forgotten what they were previously acquainted with."

In March, 1828, Dr. 'Tytler, one of the Presidency Surgeons, was appointed Lecturer in English Literature and Mathematics on Rs. 500 a month. The teaching of Natural Philosophy became also one of his concerns. In the list of text-books prescribed in 1832 occurs the name of " Introduction to Natural Philosophy" as the book to be read in the highest class. By 1833, however, the system of instruction in Natural Philosophy underwent a change, the interesting experiments having given place to hard study and mathematical demonstration. Sometime later, the experimental lectures were revived; but in a few months more, the lectures on Natural Philosophy were altogether discontinued.

After the reconstruction of the General Committee of Public Instruction in 1835 adequate attention was paid to the teaching of Science, and Astronomy, Mechanics, Hydrostatics, Hydraulics, Pneumatics and Optics were included in the regular curriculum of the highest class of the Senior Department of the Hindu College.

## Philosophy of Sphota

## Gaurinath Bhattacharyya-Research Scholar.

J
AYANTABHATTA, the reputed author of that well-known work the Nyayamanjari, an explanatory treatise on Gotamasutra, opens the chapter on the authority of Sabda as a pramana by starting an enquiry into the nature of word and sentence. It is an accomplished fact that sequence plays an important role in determining causal relation; and Jayanta argues that it is absolutely a matter of common knowledge that the cognition of a word or a sentence is immediately succeeded by the cognition of its import. But the difficulty, with which we are confronted, lies in determining the nature of the two terms-word and sentence. It is generally maintained that a word comprises of several letters while a sentence is nothing more than the aggregate of a few such words. But on a critical examination, it will appear that the definitions cited above are not strictly scientific. Vacaspatimisra, in his Tattvabindu, has the most important observation on this point. He starts by saying that none can deny the fact that when several words comprising a sentence are cognsed, we understand the import. But the point arises: Is the sense expressed by the words themselves, which are like so many indivisible units or is it expressed by the letters constituting those words? The Mimamsakas believe in the eternal and all-pervading character of letters. And Vacaspati rightly points out that it is for this reason that the Mimamsakas cannot maintain that words admit of division into letters. The raison d'etre in this case is that words being "avayavin" (whole) cannot be supposed to have an allpervading character ; and if it be maintained that letters, which are eternal and all-pervading, go to make up words, the conclusion becomes irresistible that words have also an eternal and all-pervading character. ${ }^{1}$

If it, however, be assumed after the Vaisesikas that sound and for the matter of that letter is the property of ether, ${ }^{2}$ we can no longer maintain that letters form the constituent members of words in

[^26]view of the fact that guna entities have no title to be treated as the inherent cause (samavayikarana). ${ }^{1}$

Next, we turn to the school of philosophers who opine that letters are formed of the atoms of air and that, they are destroyed as soon as they are produced. That being so, it is argued by the grammarians that we can never speak of the co-existence of the letters which are said to build up a particular word. Let us, for illustration, take up a word (Gauh, for example) in which there are three letters. Now it will not be possible for us to pronounce all of these letters at one and the same time. For, it is a fact that the first letter dies out before the third one is pronounced. Therefore, it stands that the conception of a word, as being the aggregate of several letters, is something fictitious. It may be further pointed out that those who believe that words are produced and that they have no permanent existence, will have to admit that a thing which is produced is eternal too. For it is an admitted fact that of the three causes contributing towards the production of the effect, the noninherent (asamavayikarana) cause is the most proximate and there is little fear of contradiction if it be laid down that the destruction of a product is due to the disappearance of the non-inherent cause. If the disappearance of the inherent and not of the non-inherent cause be regarded as the cause of the destruction of a product; such entities as dvyanuka would have come under the category of eternal (nitya) entities. A dvyanuka is said to be formed of two paramanus (atoms) and as the latter are believed to possess an eternal character, they cannot be destroyed under any circumstances. That being so, doyanulas will never admit of destruction. Hence the logicians maintain that it is the disappearance of the non-inherent cause and not of the inherent one that leads to the destruction of a product. Whenever the connexion between the two paramanus constituting a particular dvyanuka will be severed, it will cease to exist. Tocome to the point, we have proved already that the several letters which are said to make up a word, are pronounced in succession and as such the question of the non-inherent cause and consequently of its disappearance cannot arise in this case. Hence, we cannot conceive of the destruction of a word which is said to have been produced. And to say that a thing has birth and no death is nothing more than a dogmatic statement.

From what has been said above, it becomes clear that conjointly letters cannot express the sense. And it is obvious that they are
I. Ibid, Kar. 23.
incapable of expressing the required import singly; for, in that case, there will hardly be any justification for using a number of letters when any one of them is sufficient for the purpose.

The grammarians thus show the outstanding difficulties for those who opine that letters are expressive of sense; and in order to explain satisfactorily all the points at issue, they have themselves propounded their own theory according to which the sense is expressed by Sphota which, in its character, is indivisible and is suggested more and more clearly by each one of the different sounds (or different letters) in its succession and finally and completely suggested by the last sound (or letter ${ }^{1}$ ). We propose to discuss the merits of the theory in course of our subsequent disquisitions; for, it is necessary at the outset to know for ourselves the material grounds of objection put forth by those who oppose the theory.

Both the Mimamsakas and the Naiyayikas vehemently criticise the theory of Sphota on material grounds. The Sabarabhasya on the Mimamsasutra I. i. 5., makes it sufficiently clear that the theory of Sphota has been discarded by the Mimamsakas on the ground that it strikes at the root of some of the fundamental principles of the system of their philosophy. We have already remarked that, according to the theory of Sphota, the indivisible sentence is expressive of import and that the individual words are regarded as being fictitious carrying no meaning of their own. That being so, Sabara points out that such operations as Uha, Prasanga and Tantra, ${ }^{2}$ which the

[^27]Mimamsakas have discussed at length, become absolutely meaning. less. ${ }^{1}$ The Sruti (the Vedas) sanctions a change in the wording of a hymn according to change of circumstances. While discussing the question-Are the Vedic hymns intended to convey any meaning?Sayana strongly maintains that the Vedic hymns are expressive of sense on the ground that it has been enjoined to make necessary changes in wording in the case of a derivative sacrifice. ${ }^{2}$ It has been laid down in the Taittiriya Brahmana, III. vi. 6. ii that for purposes of a principal animal sacrifice, only one animal is sufficient and hence the hymn reads thus:-Anvenam mata manyatam anu pita anu bhrata. But in the case of a derivative sacrifice where two or more animals are required, the authorities sanction a change in wording and the term enam is replaced by enau or enan, as the case may be. It is why Sabara remarks that the injunction of the Brahmana-Neither pita nor mata should be increased (in the case of a derivative sacrifice), -leads us to infer that the word enam is required to be increased and he explicitly states that this 'increase' refers to an increase in sense as represented by a change in the forms of declension. Sayana says it in so many words that the singular in enam should be replaced by the dual or the plural according as there is a change in meaning. That being so, it is established that every Vedic word has a meaning attached to it and the same is expressed through its power of denotation.

The exponents of the theory of Sphota, as we have already observed, do not generally admit Padasphota and it is why the Mimamsakas cannot accept the theory. It should be remembered, however, that the Mimamsakas have taken a wrong view of things so far as this point is concerned. It is a fact, no doubt, that the gram-

[^28]marians have considered the claims of Vakyasphota from the empirical standpoint and have practically ignored Padasphota and other classifications of Sphota. But when Padasphota has been discussed, explained and illustrated by them, we may lay it down that words may be regarded as being expressive of sense ; and if we accept this. the Mimamsakas have little cause for any apprehension. In fact, Mandanamisra, one of the greatest pioneers of the Purvamimamsa system of Philosophy, has established Padasphota in his Sphotasiddhi. He does not believe in Vakyasphota but maintains that, word as an indivisible unit, is expressive of sense. That being so, each word becomes significant and there is ample justification for a change in the wording with a corresponding change in the meaning.

The Naiyayikas also do not accept the theory of Sphota for more reasons than one. Jayantabhatta clearly points out that it should not be supposed that the Naiyayikas criticise the theory only to make a parade of their power of argumentation. The theory of Sphota is opposed to the vital principles of their philosophy. The Naiyayikas have established the authority of Sabda as a pramana by proving that it was created by God. We have already observed that the grammarians describe Sabda as something eternal and an entity, which is said to be eternal, cannot be created by any being, be it human or divine. Thus we notice that if the theory of Sphota be once accepted, the Naiyayikas will find it difficult to prove the authority of Sabda as a pramana. Moreover, the Naiyayikas believe in the transient character of Sabda. Unlike the Mimamsakas, they aver that Sabda is produced and destroyed. But the grammarians conceive Sabda as one having a permanent character. Hence, we point out that the conception of Sabda is different in the two systems of thought. It is therefore, that the Naiyayikas raise a note of protest against the theory of Sphota. ${ }^{1}$

The Naiyayikas observe a relation of agreement in presence and absence between the perception of letters and the cognition of sense; and it is why they assert that the two are causally related. ${ }^{2}$ They
I. Tasmadanityanam varnanameva vacakatvam pratisthapaniyam parakramniyas ca sphota-Nyayamanjari, p. 367.
2. If two or more instances in which a phenomenon occurs have only one other circumstance (antecedent or consequent) in common, while two or more instances in which it does not occur (though in important points they resemble the former set of instances) have nothing in common save the absence of that circumstance-the circumstance in which the two sets differ throughout (being present in the first and absent in the second) is probably the effect or the cause or an indispensible condition of the phenomenon.-C. Read, p. 212.

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maintain that with the perception of the letters, $k, k h$, $g$, etc., we understand some sense and the cognition of sense cannot proceed without the perception of letters. It is, therefore, reasonable to admit that letters are endowed with the power of expressing sense; and to posit a new entity (viz., Sphota) is hardly warranted. The Naiyayikas again point out to their advantage that letters are designated as Sabda on the ground that they are perceived through the auditory organ. Sphota, to the contrary, can be cognised only through mental perception: ${ }^{1}$ It has been said that the realisation of Sphota requires a mental discipline and spiritual meditation. Hence the Naiyayikas opine that when we do not perceive the existence of Sphota in the usual course, it is certainly desirable that letters, which are ordinarily perceived, should be regarded as being expressive of sense. The grammarians, however, criticise the views of the Naiyayikas on this

To determine the causal relation, this method is often resorted to. The Alankarikas have laid it down as a rule that in order to distinguish Sabda guna, Sabda dosa and Sabda alankara from Artha guna, Artha dosa and Artha alankara respectively, we should always apply this method. Cp. Tatha hi gunadosalankaranam sabdarthagatatvena vyavasthites tadanva; yavyatirekanuvidhayitvam hetuh-Sahityadarpana, p. 429.
I. According to grammarians, Sphota can be perceived through the mind. Bhartrihari speaks of the two aspects of Sphota in the following verses:-

Buddhibhedadabhinnasya bhedameks praccksate-r.45. Commentors explain the verse in the following manner. They hold that one aspect of Sphota is what is technically called the Vaikhari Vak, the other aspect being the Madhyama. We shall discuss the nature of the fourfold types of Vak in a subsequent chapter. Suffice it to know for the present that articulated speech is called the Vaikhari Vak, while, when the sound has not yet reached the stage of being articulated, it is said to be the Madhyama as cognised through the mind. And the grammarians opine that this Madhyama Vak is to be identified with Sphota. Vacaspatimisra in his Tattvabindu states that Sphota or Sabdatattva is cognised by means of mental perception-Tadeva hi sarvajaninamanasapratyaksapravedaniyaprayatnabhedabhinnananadhvanipratyekavyaujaniyam tattvam-T.B. p. 3.

It should be observed, however, that Jayantabhatta describes Sphota as an entity which is cognised through the auditory organ:- C $\beta$. Paramarthatas tu sraute pratyaye pratibhasamanah-N. M., p. 37r. That Sphota is cognised by perception is almost unanimously accepted. Sankaracharya quotes the view of those who support the theory of Sphota by saying that it is cognised by perception. Bnt we must frankly admit that we do not subscribe to Jayanta's views when he says that Sphota is perceived by the auditory organ. Had Sphota been a matter of ordinary perception, the charges that are generally levelled against the theory by the Naiyayikas, namely, that it is neither perceived nor inferred, would have hardly any significance.
point. They maintain that the arguments of their adversary are based on flimsy grounds. With the help of a dilemmatic argument, they point out the weakness to which the Naiyayika theory is exposed. Do letters singly or conjointly express the sense?-ask they. Evidently the first alternative is untenable. If the second alternative be accepted, a question may be asked further-Is it required to have an aggregate of letters or is the cognition of that aggregate also compulsory? It should be noted that the Naiyayikas cannot contemplate such an aggregate on the ground that each letter is transient and not permanent. It may be argued, of course, that according to the Mimamsakas, who follow the illustrious teacher Upavarsa of respectable fame and antiquity, letters are not supposed to be perishable in characterthey are not destroyed as soon as they are pronounced ; and as such, an aggregate of letters may be logically comprehensible. But before we criticise this point, we propose to examine the view of Upavarsa regarding the permanent character of letters. Vacaspati in his Bhamati explains the position of this school by asserting that there is no authority to substantiate the truth of the proposition that letters are perishable and have momentary existence. The Sankarabhasya has the most important observation on this point. Letters are not of a momentary character on the ground that at the time of recognition (pratyavijna), they are recognised not as something similar to what have been previously perceived but as identical with them. The Bhamati clearly states that even when we utter the word "cow" for thousand and one times, we do not perceive that the word on each occasion is a different one and that these closely resemble one another. To the contrary, we perceive that the same word is pronounced on each occasion. But when we observe one cow after another we never fay that the second animal is the same as the first. Hence it is why Npavarsa maintains that when a letter pronounced at different times is not different in character, there is no necessity for the assumption that it is transient. ${ }^{1}$

Let us now point out the difficulties that make their appearance if it be held that letters are said to have permanent character. In the first place, when all letters are permanent, it is difficuit to ascertain which particular sense is expressed by which particular group of letters. Secondly, we cannot speak of the sequence of letters with reference to either time or space-in view of the supposition that they are eternal entities.

1. Yadi hi pratyuccaranam gavadivyaktivad anya nya varnavyaktayah pratiyeran tat akrtinimittam pratyavijnanam syat, natvetadasti.
-Sankarabhasya, p. 325.

As for the problem whether the aggregate of letters is required to be known, a few words are necessary. In all cases of perceptual knowledge, it is only necessary that the sense-organ comes in contact with the object (visayendriyasannikarsa). A jar, for instance, is said to be perceived when the eyes fall upon it or the hands feel it. It should be carefully noted that besides the contact between the senseorgan and the object, the cognition of the sense-organ is not needed in a case of perceptual knowledge. But in all cases of mediate knowledge, the causes must be known both by itself and in relation to its parts. For instance, in the case of an inferential knowledge, the cause (hetu) itself is required to be known and that it is invariably concomitant with the major term (sadhyavyapya). In the timehonoured example of inference-There is fire on the top of the mountain because there is smoke (Parvato bahniman dhumat), we may observe that prior to inference, there should be the knowledge of smoke (which is the cause), of the invariable concomitance between smoke and fire (which is the major term) and the like. To come to the point, verbal knowledge being a case of mediate knowledge, it is required that we should also have a perception of both the letters and their aggregate before any verbal knowledge is obtained. Thus we find that the cognition of the aggregate of letters becomes a necessity and it is to be seen, therefore, whether such a cognition can be logically obtained. It has been maintained that there is nothing to stand in the way provided the different letters are pronounced by different persons all at the same time. It should, however, be pointed out that an aggregate may be contemplated in this way, but the cognition of that aggregate cannot be obtained. For, when several men speak at a time there is a confused noise and as such, it is quite impossible to understand which particular letters have been pronounced. But granting for argument's sake that one is competent to comprehend the different sounds, it may be further stated that an aggregate of letters of like nature has been refused to have any claim to express the required sense. ${ }^{1}$ And if it be maintained that the letters will be pronounced by one man, it is obvious that each letter will have to be pronounced at successive moments of time; for different letters require different efforts to pronounce them; and consequently an aggregate is out of the question and further still is the knowledge of the same.

[^29]It has been argued, however, that though letters cannot express the sense either singly or conjointly, it may yet be legitimately supposed that the cognition of the last letter (in a word) accompanied by the impressions (samskara) produced by the perception of the preceding letters, is capable of expressing the sense. ${ }^{1}$

The aforesaid view is open to serious logical objections. It is admitted on all hands that the nature of impression is such that a particular impression, caused by the perception of a particular object, is endowed with the power of reviving the particular object to memory and nothing else. That being an accomplished fact, it is only natural that the impressions of letters are capable of reviving the letters to our memory and it is not expected that they will express the sense also. ${ }^{2}$ To say that they will function that way is tantamount to denying an admitted fact. But Kumarilabhatta still maintains that nobody disputes the fact that unless there lie in us the impressions of letters already perceived, we cannot remember the import, and it is therefore reasonable to posit that impressions are capable of expressing the sense. He , therefore, sees no reason why a new entity like Sphota should be posited at all. But Mandana opines, and rightly too, that impression which is regarded as a salkti itself cannot be supposed to be endowed with another sakti. Paramesvara explains the point by saying that impression is either a sakti of the previous cognition and residing in the soul or it is a sakti of the soul and emanating from the previous cognition. ${ }^{3}$ But if this salkti be supposed to be possessed of another sakti, the latter in its turn may be similarly supposed to be possessed of another again, and the process continuing, there will be no limit to our suppositions. ${ }^{4}$
(To be continued.)

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## An Apologia for the American Policy of George III

$\mathbf{I}^{\mathrm{T}}$T is indeed and unfortunate reflection on the conduct of historians that they instead of becoming impartial judges of men and events, often assume the mistaken attitude of prejudiced lawyers in handling the important issues which changed the destinies of humanity. It is thus that they make heroes out of mediocres, while at the same time they would not scruple to relegate a genius into the cold shade of oblivion. Policies they would defend and criticise in the most onesided manner, leaving enough room for an appeal of audi alteram partem. This distorted vision of history has inspired the verdict that unanimously condemns George III, for the revolt of the Thirteen Colonies. The English king had the bitter misfortune to be introdued to posterity as the man who was responsible for the tragic separation between Britain and her Empire across the Atlantic. But to a sober student of the past, it seems almost incredible that any one individual could ever be branded as the author of a revolution. In fact, there are ample materials for the defence of the policy pursued by George III with regard to America. In dealing with the whole question, we should follow three lines of argument-(i) whether the charges actually brought against the king are fully admissible, (ii) how far Britain could have retained her hold on America had there been no George III to disturb the relation between the two countries; and lastly, (iii) was the actual result of the catastrophe only an unmitigated curse?

It was George Grenville, " the apostle of Colonial Taxation," with his much-maligned Stamp Act of 1765 , who first brought the issue to the forefront. Grenville's measure had always been condemned in no uncertain terms as the most stupid. It is said that Grenville shoold have the foresight of a statesman to turn down any such obnoxious idea of taxing the colonies. "The blunder of direct taxation avoided by Walpole in 1730," says Robertson, "became a crime in 1765." But the same author had to admit that the measure was " the outcome of a grinding necessity." The Seven Years' War had saddled Great Britain with a heavy burden of debt, and it was not unnatural that the British statesman should expect the colonies to contribute their
quota to the cost of imperial defence. The colonies were in a prosperous condition, while the amount demanded was quite reasonable, if not insignificant, when compared with the burden borne by the British tax-payer himself. Moreover, the money was to be spent for no other purpose than plain colonial needs. The critics of the Act point to the method of direct taxation as objectionable, in so far as it was unprecedented. But the idea was actually not new. For instance, George Vaughan, an agent of New Hemisphere, proposed it as early as 1715 . In 1717 and 1722 , Archibald Cummings, Custom Officer at Boston, developed a scheme for Stamp Tax; Sir William Keith, the Governor of Pennsylvania, had made a similar suggestion in 1739. And we all know that Walpole seriously considered the question of adopting such a measure. The duties were also much lighter than those charged in England, and, as a revenue measure, the Stamp Act had been admitted by all as eminently fair and well-constructed. The suggestion that the colonies should have been given a chance to tax themselves instead of being taxed directly from St. Stephens, also falls to the ground when we find that only ten years ago at the Albany Congress, the Colonies had proved that they were ' one in promises to pay, thirteen when performance was due." Even Adam Smith agreed with Grenville that the constituent parts of the Empire should be obliged to support its own civil and military establishments, and to pay its proper share of the expense of the general administration of the British Empire. He also believed that it naturally lay with the British Parliament to determine the amount to be assessed ; because " a Colonial Assembly, though it might be an admirable judge of the affairs within its own territories, could not be expected to determine what is necessary for the defence and support of the whole Empire." We should also bear in mind that neither the genius of Chatham nor the nice logical subtlety of Burke found anything to object when the measure was passed in Parliament, and Channings tells us that " in America, too, politicians thought that the Act would go quietly into effect ; one of them Richard Henry Lee of Virginia even applied for one of the collectorships." But even in spite of these justifications, if we hold Grenville's conduct as inexpedient, there is nothing to show that George III was responsible for it. On the other hand, we learn from his correspondence that he denounced Grenville's policy. "Mr. Grenville's conduct," he wrote among other things in 1767, "is as abundant in absurdities as in the affairs of the Stamp Act. . . . . ." That shows beyond doubt that George III never gave his full consent in the matter of levying taxes on the Americans.

Next comes Rockingham who has been praised beyond his deserts for medding with the American affairs. To his credit goes the repeal of the Stamp Act owing to the riots and agitation in America which went so far as to deny the right of British Parliament to tax the Colonies. But Rockingham was clever enough to save himself from the attacks of the opposition by passing the Declaratory Act asserting the absolute supremacy of the Crown and Parliament over the Colonies. The world is generally misled into the belief that Rockingham's conduct was wise and statesmanlike, because Burke had praised this so-called policy of pacification as having given "perfect content to our dependencies." But a little thought will convince us that Shelburne's criticism of the measure was very accurate when he declared:

> "The British Government ought to have enforced the Stamp Act with its whole power, or to have acknowledged its error with ingeniousness and candour, which would have showed a frankness and condescension which must have been interpreted in true dignity; but unhappily the British Parliament did neither. It affirmed its own right of enacting whilst it repealed the Act itself in visible compliance with the clamour of America, and thereby naturally suggested to the provinces that the timidity of the British Parliament kept pace with its indisposition towards them."

The abandonment of the Stamp Act was at once interpreted by Otis and other American left-wingers as a virtual defeat of the Government at the hands of the defiant rioters. Rockingham thus left the whole problen in an ambiguous position. He had two clear alternatives before him. He could have forced the colonies to accept the letter of the law as it stood, which task would have been easier at the moment than later on, because the colonial opposition had not as yet sufficiently crystallised; or he could have given up all pretensions of Parliamentary supremacy over the Americans. But he had neither the insight nor the courage to adopt any of these alternatives, and thus by his bungling he left the colonial problem too delicate and sensitive to be successfully tackled by any statesman of the age.

Rockingham was followed by the " mosaic ministry " of Chatham, in which Charles Townshend entered as the Chancellor of the Exchequer. Everyone was expecting with high hopes that the "Great Commoner" would once more save the nation as he had done ten years ago. But, paradoxical though it may appear, " the most disastrous and gratuitous of English blunders abroad" dates from the time when the greatest English protagonist of the Colonists was the Prime Minister. The new Chancellor opened up the healed sore by imposing new duties on tea, paper, glass and painter's colour. It seems clear that Townshend
took an unwise step in so hastily translating the Declaratory Act into practice which once more inflamed the colonial bitterness. But it must be admitted at the same time that the new taxes were not objectionable when judged even by the existing colonial standard. So long the Americans directed all their attack against internal taxation, but they accepted the right of Parliament to levy external taxes and regulate their trade so long as it raised no internal revenue. Townshend's taxes were all external or port duties and therefore admittedly constitutional. Even Dickinson in one of his famous letters stated that " the Parliament unquestionably possesses a legal authority to regulate the trade of Great Britain and all its Colonies. . . . . We are but parts of a whole and therefore there must exist a power somewhere to preside and preserve the connexion in due order. This power is lodged in the Parliament. . . ." This is almost tantamount to the admission that Parliament was a sovereign assembly, and what is taxation but an attribute of sovereignty?

From the point of view of equity also, Townshend's position was not untenable. The proceeds of these taxes were to be devoted to the maintenance of an American Civil List, and the surplus, if any, was to be applied to the support of the army ; that is, they would be spent for purely colonial purposes. Moreover, "the duties on paint, paper and glass," writes Channings, "had acted as a protective tariff in America and had stimulated manufacturing there ; so much so indeed that William S. Johnson thought the colonists would do well to protest against taking them off." The colonists were thus fairly caught in their own argument. But in this case also, as in Grenville's, there is nothing to show that the inspiration to tax the colonists came from George III. Charles Townshend was not Lord Bute, and for his measures it is unjust to blame the king.

The reception of the new Acts in America, however, was not very encouraging. The colonists have by this time shifted their ground and the colonial public opinion exhibited a peculiar inconsistency in protesting against the new taxes. The truth is that the mass seemed to be inclined to accept them, and we know, for instance, that de Kalb, a French agent, engaged in fomenting rebellion, "came to the sad conclusion that if the taxes were kept within these moderate limits, England would succeed in maintaining her authority." But the extremists like Samuel Adams realised that opposition to the new taxes could only be maintained if parliamentary authority was denied in all matters whatsoever. Perceiving that a new argument was needed, they left aside the distinction between internal and external taxation, and took their stand on the rights of man. Law of

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Nature, they found it to their convenience, precluded all legisiation in the colonies by Parliament. It was in this way that the agitation against the new measures was very neatly fomented, and when in $x_{77} 0$ three colonists were killed in an encounter with soldiers in Boston, they at once glorified it into a massacre.

It was about this time that Lord North, the chief clerk of George III, came to the head of the administration. The affairs of his régime, it is well known, were the doings of the monarch himself, and it is here that we get a real glimpse of George III's policy with regard to America. In 1770, all the new duties were repealed except that on tea. North's measure has been criticised as strongly as Rockingham's has been praised. The repeal of the new duties he favoured, in order to soothe the excitement of the colonists, and thus win back the majority of them from the extremist camp. But at the same time. George III rightly asserted that all vestige of the sovereignty of British Parliament should not be completely effaced. It was with this end in view that the King wrote to Lord North in 1774, " I am clear that there must always be one tax to keep up the right, and as such I approve the Tea Duty." While there is a complete unanimity of opinion on the point that the conciliatory nature of the Government, as displayed by the repeal of the taxes, was statesmanlike, there is a wide divergence of views regarding the retention of the 3d. Tea Duty, which, incidentally, gave the colonists cheaper tea than in Britain. But its necessity may be realised from the fact that had it also been abandoned, the colonists would have established a precedent to coerce Parliament whenever they liked. It is but natural that neither George III nor Parliament would allow themselves to be cowed down by a handful of agitators. Even Chatham perhaps would have refused to swallow such a humiliation. If Rockingham's Declaratory Act can claim to be a statesmanlike step, we find it difficult to deny the same complement to North's Tea Duty.

In 1770, there were three possible policies for Britain to adopt. First, a frank admission that the problem could not be solved, and thus granting a free concession of virtual independence. But that was impossible, because of the mere fact that " its supporters on either side of the Atlantic," as Robertson finely puts it, "would not have filled a hackney coach"! The second was what was called the policy of " clean slate "--redressing all colonial grievances, financial, commercial and administrative. But the advocates of this view themselves were not unanimous in deciding how far the coionial grievances were just and should be tolerated, and the rest dismissed. At the same time, the Government held that if once the colonial grievances were
admitted, they would not stop to multiply them and extort concessions. Lastly, there was " the policy of uncompromising assertion of defied imperial authority " to be followed by a revision of the code guiding the relation between the mother-country and the daughters. In view of these three possible courses, the one followed by Lord North, or more correctly by George III, cannot be too strongly condemned.

But the colonists now took up an unreasonable attitude. In I773, North, in order to help the East India Company then in financial distress, allowed them to export tea to America free of English duty but liable only to small colonial duty, so that the Company would get rid of their surplus stock, and the colonists would get their tea cheaper. But then came the "Boston Tea Party" which indicated that the unbending stubbornness of the Radicals in America was gradually gaining the upper hand among the colonists. Green, the English historian, has criticised the repressive measures that followed the incident, and he almost suggested that the war was considerably hastened by the penal acts against Massachusetts and Boston. But before accepting that verdict one should remember that the Tea Party evoked widespread condemnation. Chatham denounced it as a crime, and wrote ". . . . . nor would it be real kindness to the Americans to adopt their passions and wild pretensions, when they manifestly violate the most indispensable ties of civil society." Franklin said that it was an act of violent injustice that called for a speedy and violent reparation. But the colonists had by this time turned obstinate, and, at the Congress of Philadelphia, almost ushered in the war atmosphere and thus threw all chances of a peaceful settlement to the winds. It must, however, be said to Lord North's credit that even after this, he offered to forego taxes in case of any colony voluntarily paying a fair share of the cost of its defence and government. But the colonists were already on the war path and ignored North's appeal.

Thus we find that Lord North was not as much bent upon war as he is popularly supposed to be: nor is it possible to believe that he was completely ignorant of handling such great issues of state-craft. His activities beside the American question entirely disprove such a false notion. In 1771, he adopted a firm attitude towards Spain's action in the Falklands, and secured its disavowal. In 1773, he was responsible for the Regulating Act, and next year his Quebec Act gave Canada a constitution which evoked satisfaction in all quarters.

Now, we should get an idea of what the policy of the King actually was. We cannot call it vacillating and uncertain. We have already seen that he did not approve of Grenville's measure, but when once the issue was forced upon him, he took a firm attitude.

The following lines from the Cambridge History of British Empire, (Vol. ㄷ) will be useful for our purpose:-
"On the American question, the King's policy was clear, consistent and determined. He held from the first that the principle at stake was, whether the Colonies would continue to accept the authority of the Crown and Parliament. He held that a policy of firmness undeviatingly pursued would have settled the question. The policy of conciliation and retraction he could not endure. . . . . If his generals had served him with the same concentration of purpose, if his people at home had with unanimity espoused his cause, he would almost certainly have succeeded in quelling the rebellion, for the time being."
Perhaps it would not have been necessary at all to take up arms had George III been given his free-hand in the matter. Our judgment on the whole case is prejudiced by the fortunes of the war. But it is unjust to hold the King responsible for the reverses that his troops suffered on the fields of battle. Perhaps George III would not have been condemned at the bar of history had Burgoyne succeeded at Saratoga and Cornwallis at Yorktown.

We have so long confined our attention to the constitutional struggle, which preceded, and resulted in, the wars. Let us now approach the question of the King's responsibility from a different angle. Can we assert that America would have always remained in peace with Britain had George III been another George II? Or, in other words, was not the separation between the two countries inevitable?

The Colonies except Georgia were all seventeenth century creations, founded " when religion and politics were in England still tangled and before Parliament's supremacy had been assumed." The characteristics of the ${ }^{*}$ American character were thus naturally: great individual enterprise, intense particularism, and a feeling that public will can legitimately act outside and above the law. In Britain, the constitution had drifted towards parliamentary government but in America, where assemblies were more democratic than the House of Commons, there had been much less change in their ideas and position. It was their business as it had once been Parliament's to obstruct the executive rather than to control it, and, as a result, "friction was the normal state of any colonial government." The Puritanism of the New England peoples fostered the growth of a spirit of independence which found its expression in the assertion of "no taxation without representation." But representation was physically impossible, owing to distance. Distance also stood in the way of exchange of mutual ideas and sympathies between the colonies and the home-country. At the same time, the absence of any central authority controlling individual colonies made it impossible for Britain to deal with all of
them together as one united body, and hampered the possibilities of forming a contract of which Britain could be one party, and the Colonies the other. Then, there was the burden of commercial restrictions which told heavily on the colonies. Mercantilism, as it is called, was the creed of the age, and it was thought that the colonies existed primarily for the benefit of the mother-country, and efforts were made to ensure that the Balance of Trade should be in favour of Great Britain. Space would not permit us to dilate on the system in detail here. As it stood, it naturally encouraged smuggling, and when contraband trading was stopped, the burden of restrictions proved not only galling but too heavy for the colonies to bear. As early as 1730 , Montesquieu had pointed to the restrictive character of English commercial code, and had apprehended that England would be the first nation abandoned by her colonies.

Lastly, we have to consider the result of the Seven Years' War. The disappearance of the French Flag from the North American Continent as a result of the Peace of Paris, removed the French danger for the Colonies, and the security from the French led them to think that they were independent of the British. It was only a question of time when that independence would be formally recognised. In fact, many a keen observer of the age prophesied the revolt long before its actual occurrence. Vergennes, the French Ambassador at Constantinople, for example, made a remarkable prophecy when he said to an English traveller-" England will soon repent of having removed the only check that could keep her colonies in awe. She will call them on to contribute towards supporting the burdens they have helped to bring on her, and they will answer by striking off all dependence." " Colonies," Turgot had declared, " are like fruits which remain on the tree till they are ripe. America, as soon as she can take care of herself, will do as Carthage did," Thus when separation was inevitable, George III should not be made the poor scapegoat.

We now come to our third and the last question-Was the American Revolution an unmitigated curse for Britain? The tragedy was not without good results. "Those who regret separation should remember two things," writes a modern historian, " first that inside the Empire the colonies would have grown nearly as fast as they did outside, the balance of power would then have shifted across the Atlantic and the elasticity that the constitution was to reveal in the nineteenth century which kept Britain from revolution, would have been hard to discover with America fast becoming a predominant partner. Secondly, if the old British Empire had endured, the most of the new could never have been founded. The new Empire
was to be more scattered than the old, and for long apparently weaker, but it expressed a higher degree of political agreement; "it had no roots in the seventeenth century struggles over Church and State, and its political development has been flexible largely because it was built on the thesis resisted by America, the sovereignty of Parliament."

Under these circumstances, are we perfectly justified in accepting the view so widely held, that George III, more than any one else, brought about the disruption of the First British Empire? It is already clear that the loss sustained was not so severe as might appear at the first sight. It is true that the Empire was lost, but that loss could not have been avoided ; moreover, as we have seen, out of evil came the good, which ensured the strength and durability of the new and the greater Empire. But if it is true that the King could not be given the credit for that achievement, it is equally true that he should not either be awarded the full share of the responsibility of the loss of England's first Empire across the seas.

## OURSELVES

## COLLEGE UNION NOTES

## THE FOUNDERS' DAY.

This solemn function of our College life took place on Tuesday, the 17th January last. The guests were cordially received by Principal Sen, the Professors and the students; and were treated to an enjoyable tea-party on the College lawn. The function this year was of interest in more than one respect. At the meeting which followed in the Physics Theatre, a portrait of the late Prof. Panchanandas Mookherjee was unveiled by Mr. Justice D. N. Mitter, who presided over the function in the absence of Sir B. B. Ghose. Principal Sen and Mr. S. K. Chatterjee, r.c.s., an exstudent of the College, spoke on the distinguished career of the late Professor.

In his Annual Report, Principal B. M. Sen sketched the early history of our great Institution and paid grateful homage to the pious memory of the Founders who, in their noble endeavour and achievement, were indeed inspired with the gift of prophetic vision. The all-round improvement effected in the College was borne out by the results at the University and Public Service Examinations.

Prof. P. C. Mahalanobis next spoke on the connection of Raja Ram Mohun Roy with the opening of the College, and claimed the Raja as the pioneer of scientific education in India. Mr. N. K. Basu, m.L.c., recalled his connections with the College where he was a student more than forty years ago, and Mr. J. K. Biswas, another alumnus of the College, praised the work done by the College Literary Societies and Students' Aid Fund. Mr. J. M. Bottomley thanked the organisers of the function for the pleasant evening. The President then spoke at length on his reminiscences of the student life of his day and congratulated the College for maintaining the hallowed traditions of this great nursery of Bengal's intellects like Bankim Chandra Chatterjee, Rashbehari Ghose, Asutosh Mookherjee and Chittaranjan Das. Prof. A. K. Chanda next proposed a vote of thanks to the chair and the speakers, with which the meeting was terminated.

Among those present were-Mr. and Mrs. W. C. Wordsworth, Mr. and Mrs. H. R. Wilkinson, Mr. and Mrs. J. M. Bottomley, Dr. and Mrs. W. S. Urquhart, Rev. Father Vermiere, Mr. Justice D. N. Mitter, Mr. Justice A. K. Roy, Mr. Justice Nasim Ali, Sir Deva Prosad Sarvadhikari, Sir Z. R. Zahid Surhwardy, Sir Jadunath Sarkar, Mr. S. N. Mallick, Mr. Kamini Kumar Chanda, Mr. Narendra Kumar Basu, Principals K. Zachariah, S. N. Das Gupta, Khan Bahadur M. Hidayet Hossain, Nawabzada A. S. M. Latifur Rahaman, Captain D. Ahmed, Prof. Hiralal Haldar, Dr. Shyamadas Mookherjee, Prof. Khagendra Nath Mitter, Rai Hem Chandra Dey Bahadur, Prof. Narendra Nath Chakravartti, Dr. Surendra Nath Sen, Messrs. Jyoti Prosad Sarvadhikari, Mohini Kanta Ghatak, Satyananda

Bose, Amulyadhon Addy, Mukunda Behari Mullick, S. M. Bose, P. K. Chakravartty, Satinath Roy, Charu Chandra Biswas, Roma Prosad Mookherjee, Shyama Prosad Mukherjee, Satyendra Chandra Ghose Maulik, J. K. Biswas, S. K. Chatterjee, r.c.s., Saibal K. Gupta, I.c.s., K. ©. Chaudhuri, N. N. Mazumdar, Mr, and Mrs. B. C. Dutta, Prof, and Mrs. Binoy K. Sarkar, Dr. and Mrs. Bijoli Sarkar, Rai Bahadur Mallinath Roy, Rai Saheb Hari Sadhan Mookherjee, Dr. P. N. Banerjee, Dr. Ganesh Prosad, Dr. D. R. Bhandarkar, Dr. P. C. Mitter, Dr. H. K. Sen, Dr. N. R. Sen, Dr. S. K. Mitra, Dr. Suniti Kumar Chatterjee, Mrs. S. K. Sen, Mrs. A. Chatterjee, Mrs. K. N. Chatterjee, Mrs. B. P. Mazumdar, Mrs. S. C. Sarkar, Mrs. S. Datta, Mrs. J. C. Sen Gupta, Principals S. C. Bagchi, Monoranjan Mittra, Professor Gopal Chandra Ganguly, Rai Saheb Rebati Mohun Das, Rai Saheb Akshoy Kumar Dutta-Gupta, Mr. Abinash Chandra Mazumdar, Rai Hem Kumar Mullick Bahadur, Rai Amal Krishna Mookerjee Bahadur, Rai Bahadur Dr. Haridhan Dutta, Messrs. Abdul Karim, Hasibuddin Ahmed, Jotindra Mohun Roy, Bijoy Kumar Ganguly, Ramoni Kanta Roy, Bisweswar Bhattacharya, Amarendra Nath Pal Chaudhury, Ashutosh Dutta, Bimal Chandra Chatterjee, Kiron Chandra.Mitter, Atul Chandra Gupta, Amiruddin Ahmed, Gopal Chandra Das, Sachindra Nath Mookerjee, Sitaram Banerjee, Jajneswar Mazumdar, Professors Sahid Surhwardy, Phanindra Lal Ganguly, Hem Chandra Sen, Dhruba Kumar Pal, Bhola Nath Roy, B. B. Roy, K. D. Ghose, Nirmal Chandra Bhattacharya, Sushil Chandra Mitter, Priyaranjan Sen, Narendra Nath Sarkar, Amiya Kumar Sen, Arun Kumar Sen, Humayun Z. A. Kabir, Sambau Nath Banerjee, Hari Charan Ghose, Principal S. N. Moitra, Dr. Binode Behari Dutta, Dr. M. Z. Siddique, Dr. J. P. Neogi, Dr. Rohini Mohun Choudhury, Dr. H. C. Rai Chaudhuri, Dr. A. P. Das Gupta, Dr. Nripendra Nath Sen, Dr. B. N. Chuckerburtty, Dr. M. N. Goswami, Dr. P. B. Sarkar, Dr. H. K. Mookerjee, Dr. Sukumar Ranjan Das, Professors Sushil Kumar Acharya, Jogesh Chandra Mookerjee, Priyada Ranjan Roy, Kiron Kumar Sen Gupta, Nirmal Nath Chatterjee.

## biHar Earthouake relief fund.

Presidency CoHege, true to its characteristic generosity, responded to the call for help for the distressed people of Bihar. Soon after the tragic calamity, a Committee was formed in the College, and voluntary contributions from students and the members of the staff amounted to the encouraging total of Rs. $1,725 / 8 /$ - a sum which perhaps no other educa. tional institution of the country can boast to have contributed. It is also interesting to note that our first instalment of Rs. $200 /$ - is one of the first contributions sent by any College in the province. We were, however, sanguine to realise more, so that our total could have reached at least Rs. 2,000/, had not the Eden Hindu Hostel decided to keep themselves aloof and raise their own funds. The contributions from the staff amounted to Rs. 850/- while the rest was collected from among the students along with the sum of Rs. 162/- paid by the College Hindi Literary Society. The following contributions from among the members of the staff deserve special mention--Prof. and Mrs. P. C. Ghose, Rs. 75/, Prof. A. K. Chanda, Rs. 5 I/-, Prof. P. C. Mahalanobis, Rs. $50 /-$ Prof. S. C. Banerji, Rs. 50/-, and Mr. S. N. Ganguly (Head Assistant to the Principal), Rs. $50 /-$

## the college steamer party.

The Annual Steamer Party of the Union came off on Saturday, the toth March last. The steamer, with a company of about three hundred including members of the staff, started from the Chandpal Ghat at $12-30$ p.m. Lively music and enjoyable comic sketches by the well-known "Funniman" and others served to keep the party in high spirit. Light refreshment was served on board. We travelled about thirty miles down the Hooghli when our steamer turned back and at about 6-30 P.M. we came back to Chandpal Ghat. The Secretary takes this opportunity of thanking Mrs. Sen, Mrs. Mahalanobis, Mrs. Datta and Mrs. Sen-Gupta who very kindly graced the occasion in response to our humble invitation.

The College Union Executive also gave an 'At Home' to those members of the staff and students who have worked whole-heartedly to make each and every social function in the College a success. The party was given at the Principal's residence on Saturday, the 14 th April last, and was greatly enjoyed by everyone present.

Such, in brief, is the report of the activities of the Union. Before concluding, the Secretary has the pleasant function to announce that our popular Principal proposes to revive the Debating Section of the Union from the coming session. We hope that a constitution of the Union will also no longer be denied to us, when we have at the head of our College, Principal B. M. Sen who takes so keen an interest in the affairs of the Union. Our grateful thanks to him.

Sukumar Chowdhury,
Secretary.

## ATHLETIC CLUB

## ANNUAL SPORTS MEETING.

The College celebrated its Annual Sports Meeting on Monday, the 5th February, 1934, in the presence of a large gathering composed of the staff, students and some distinguished visitors. Quite a good number of competitors took part and every event was very keenly contested. Messrs. William Jacks and Chinmoy Ghosh were the Best Men winning 36 points each. In a tug-of-war between the staff and the ex-students, the former scored a seemingly easy victory.

After the events were over, Mrs. B. M. Sen kindly gave away the prizes.
Results:-
I. Ioo Yards Flat Race :-I. S. Gupta; II. B. Das; III. A. Chowdhury.
2. Throwing the Cricket Ball :-I. A. Roy; II. E. Chowdhury; III. P. Das.

220 Yards Flat Race :-I. C. Ghosh ; II. S. Gupta ; III. B. Das. Long Jump :-I. A. Chowdhury ; II. S. Gupta; III. R. Sinha. Sack Race :-I. A. Mirza; II. A. Chatterji ; III. P. Das.
High Jump :-I. W. Jacks ; II. R. Deb; III. E. Chowdhury. Putting the Weight:-I. W. Jacks; II. S. Roy; III. A. Bhose.
8. 440 Yards Race :-I. C. Ghosh ; II. S. Hossain ; III. B. Das.
9. Javeline Throw :-I. R. Dutt ; II. J. Chowdhury ; III. A. Roy,
10. Ex-Students' 220 Yards Flat Race :-I. D. Mukherji; II. S. Deb.

Ir. 880 Yards Race :-I. C. Ghosh ; II. S. Hossain ; III. B. Das.
12. Pole Vault:-I. W. Jacks ; II. R. Dutt ; III. P. Ghosh.
13. Relay Race :-First Year students (C. Ghosh, B. Das, A Mirza, \& A. Chowdhury).
14. Tug-of-War:-First Year students.
15. Go as you like :-D. Chakrabarty.

College Blues for 1934 were awarded to:-
Football:-Dwijen Roy.
Hockey :-(I) D. Prins, and (2) D. Roy Chowdhury.
Best Athlete of 1933 :-Shyam Sen.
Three Medals, presented by Prof. K. N. Chakrabarty, were awarded to the College Table-Tennis Team, comprising of (I) Manoranjan Das (Captain), (2) Ashit Mukherji, and (3) Kasikhetra Ganguli.

Ajoy Bhose, Manoranjan Das, Jt. Secretaries.

## ECONOMICS SEMINAR

The First Meeting of the Seminar came off on Saturday, the 17th March, in the Physics Theatre. Dr. J. C. Sinha delivered a popular lecture on 'The Rupee-its past, present and future.' Owing to unavoidable difficulties we could not have Principal Sen in the chair.

Dr. Sinha began by saying that the use of coinage did not begin with one fine morning, and gave a detailed history as to how through different ages a uniform system of coinage came to be established. In the Moghul period there were at the same time many different forms of coin circulating at the same place-an utterly chaotic state of affairs conceivable. The Indian rupee first took its origin from the time of Sher Shah who gave it the name of 'Rupeya.'

Dealing with its present situation, Dr. Sinha said that there were several Commissions to stabilise the rupee during the British administration and within three or four years we are going to have another. Dr. Sinha suggested that the future stabilisation of the rupee should rest upon a gold bullion standard with the rupee fixed at a limited gold value.

We take this opportunity of thanking Dr. Sinha for his having taken the kind trouble for the Seminar, and a few of our fellow-students who helped me in various ways.

Kalidas Lahiri,
Secretary.

## HISTORICAL SEMINAR

The Third Special Meeting of the above Seminar came off on the $I_{3}{ }^{\text {th }}$ of December, 1933, with Principal B. M. Sen in the chair. Dr. Radhagovinda Bysack read an interesting paper on "The Early History of

Kamarupa under the Bardhana Dynasty." The meeting was well attended. Some distinguished historians like Dr. Hem Chandra Roy Chowdhury and others graced the meeting with their kind presence. Dr.' Bysack's paper was as interesting as it was learned. He dwelt particularly on the relations that existed between King Harsha of Kanauj and his contemporary King of Kamarupa. The meeting came to a close in due course.

The Seventh General Meeting of the above Seminar was convened on the 22nd of March last, under the presidency of Prof. S. C. Sarkar. Sj. Nikhilnath Chakravartty of the Fifth Year Class read an interesting paper on "An Apologia for George III" in which he tried to defend the American policy of the King. He concluded with the opinion that the loss of the American colonies was inevitable for national feelings could never be suppressed. A discussion followed in which Sjs. Krishnagobinda Bose of the Fifth Year Class, Shibashambhu Chatterji and Rathindra Chandra Deb of the Third Year Class took part. Then the President in his inimitable way explained the different standpoints laying special stress on the fact that like all other politicians of his time, including even Burke and Chatham, George III failed to grasp the true situation. He lucidly explained to us that the Americans were really wanting what is now called "Dominion Status," a term which was unknown in the eighteenth century. The whole American dispute centred round two principles: taxation and sovereignty. It was only when the colonies were denied the sovereignty of their Provincial Parliaments by the English King and British Parliament that they declared for full freedom.

Then the meeting came to a close.

> Rathindra Chandra Deb, Secretary.

## PHILOSOPHY SEMINAR

With tears of joy we remember the departure of Dr. Mahendra Nath Sarkar, who sailed for Rome to deliver a course of lectures there. We wish him success and look out for his happy return amongst us.

The first meeting of the Seminar of the session was held on Saturday, the 17 th February, at 2 P.m., in the Seminar room, with Dr. N. K. Brahma, m.A., ph.D., P.R.S., in the chair. Mr. Anil Mohan Guptu read a paper on "The Relation of Philosophy to Religion." "Philosophy," he said, " is identical with religion ; and true knowledge cannot but culminate into religion." He attempted to show that both their beginning and end, and even their means are identical. In conclusion he said that in the higher realm of thought, where Thought and Being are identical, everything is religious.

The President remarked that the paper was a good one for the first attempt. Then before his speech on the subject, he remarked that the lack of enthusiasm to utilise the Seminar is regrettable and suggested the means whereby we may gain from it. Then he described the relation between philosophy and religion from various other standpoints which the writer omitted. The meeting came to a close at 3 -30 p.m.

## ARABIC AND PERSIAN LITERARY SOCIETY

The Third Meeting of the Society was held on the 25th August, 1933, under the presidency of Professor Md. Sanaullah, m.a., to discuss the measures to be adopted to create an interest among students in the affairs of the Society. The President showed the importance of Arabic and Persian Literature and expressed his regret at the negligence of students towards these languages. All the members present promised to do their best for the progress of the Society. The meeting terminated with a vote of thanks to the chair.

The Fourth Meeting came off on the 8th September, 1933, with Professor Sanaullah, m.A., in the chair. Mr. M. Ariff Ali read a paper on the "Witticism of Mulla Do Piaza," the court-wit of Akbar the Great. The writer had cited instances to show how the great wit used to delight the monarch and his court with his splendid witticism and how far a king was justified in keeping a wit in his court. The President remarked that the essay was a very interesting one and appreciated the topic the writer had chosen.

The Fifth Meeting came off on the roth November, 1933. Professor Sanaullah, m.A., presided over the meeting. Mr. M. Anwaruddin Hasan read a paper on the "Earliest Traces of Drama in the Persian Literature." The essayist proved that the early and middle Persians had no taste for drama and it was only in the beginning of the nineteenth century that dramatists appeared on the Persian soil, and showed how drama writing developed in Persia. The President expressed his appreciation and formed a high opinion of the writer. The meeting concluded with the speech by the President.

A Special Meeting of the Society was convened on the 8th December, 1933, to consider the possibilities of a group photograph of the staff and students of the Arabic and Persian Department. The proposal was unanimously accepted and the date was fixed. On the 16th December, 1933, the said group photograph was taken at the Baker Laboratory ground. Among those present were:-Principal B. M. Sen, Professors Md. Sanaullah, M. M. Haq; Messrs. Maqbool Ahmed, T. Rizvi, the Secretary and the Assistant Secretary.
M. Anwaruddin Hasan,

Secretary.

## HINDI LITERARY SOCIETY

Several meetings of the above Society were held under the presidency of Professor S. N. Lala in which, in addition to the usual work, the following extra work was done.

At a meeting it was decided to hold the annual function of the Society in January, 1934, but later, owing to Half-yearly and Test Examinations, it was decided that it should be postponed. At a special meeting, members of the Society decided to make some contribution towards the Bihar Earthquake Relief Fund. Through the enthusiasm of the members a substantial sum was raised. A sum of Rs. I62/- in all was paid to the Treasurer of the Presidency College Bihar Earthquake Relief Fund. The first instalment of Rs. IoI/- was paid on the 15 th of February
and the second instalment of Rs. 6I/- on the and of March. At the last meeting of the Society, Mr. Balbhadra Choubey of the First Year Science Class read a paper on the poet "Bhusan and his Poems." An interesting discussion followed in which the President, Mr. Surajmal Daga and Mr. Mohanlal Baid took part. With a vote of thanks to the chair the meeting terminated.

Surajmal Daga,<br>Secretary.

## SCIENCE ASSOCIATION

The Fifth Lecture of the above Association was delivered on the gth December, by Dr. S. P. Agharker, Ghosh Professor of Botany of the University College of Science on "Insectivorous Plants," with Principal B. M. Sen in the chair. Dr. Agharker explained in a brilliant way how these plants capture and digest the insects. At the conclusion of the meeting, Prof. Banerjee pointed out that the queer ideas about maneating trees and electric plants are altogether baseless.

The third excursion was arranged on the and February to the Titaghur Paper Mills, Ltd. at Kankinara. About thirty student members accompanied by Dr. P. Neogy, Dr. Q. Khoda, Profs. H. Mukherjee and $N$. Sen formed the party. The excursion was very enjoyable and instructive, and the Company took every care to explain the process in detail to all present.

The next meeting came off on the 3rd February. Dr. Anukul Ch. Sircar delivered a lecture on "Coal-tar and its Wonders," on the occasion, with the Principal in the chair. The speaker, in course of his lecture, showed that the statement " Consumption of Coal-tar in a country is the Barometer of its civilisation" is fully justified, as everything that is required in a civilised country may be had of this nasty tar. With a vote of thanks by Dr. P. Neogy the meeting terminated.

The Seventh Meeting was held on the 24th February in which Dr. S. K. Mitra, Khaira Professor of Physics of the University College of Science, delivered a lecture on the "Inosphere." He explained how far this ionised upper atmosphere is responsible for the propagation of the radio-waves and for the wireless echoes. The lecture was illustrated by an interesting film which was taken from an experiment conducted by him during the last solar eclipse to see whether this inosphere owes its origin to the ultra-violet rays of the sun or corpuscles coming of it. Dr. S. Datta presided over the meeting. Messrs. Adair Dutt \& Co., Ltd. lent the film projector for which the Secretary is thankful to them.

The Eighth lecture was delivered by Dr. Amiya Banerjee of Allahabad University, an old student of this College, on the "Expanding Universe," on the 3rd March, with our Principal in the chair. Dr. Banerjee explained to us how the informations regarding the universe are obtained and how it is expanding. Then he gave its explanation on the "Theory of Relativity." The keen insight with which he dealt with the subject was admirable. With a vote of thanks by Dr. S. Datta, the meeting ended.

This, in brief, is the work done by the Association up till now. The session is coming to a close and with it the Secretary's term of office. So he
takes this opportunity of offering thanks to the Principal and Professors, specially to Dr. S. Datta, for their kind co-operation and active participation in the workings of the Association. The Secretary cannot withhold thanks to the members who by their sympathy have helped him greatly in furthering the ends of the Association.

## Santosh Ch, Mukherjee,

Secretary.

## GEOLOGICAL INSTITUTE

The Third Ordinary General Meeting was held on the 24 th November, 1933, with Mr. W. D. West, M.A. (Cantab.), in the chair. Dr. T. P. Das Gupta, m.sc. (Cal.), ph.D. (Lond.), then delivered an interesting lecture on "Modern Trends in the Study of Palaontology." During the course of his lecture he said that Palæontology is now considered to be an integral part of Biology. Another important aspect of Palæontology is the geographical distribution of faunas. He also mentioned that Ecology plays an important part in the distribution of faunas. It has a special bearing on the correlation of strata within any province. The lecture was profusely illustrated with lantern slides.

The Fourth Ordinary General Meeting was held on the 6th December, [933, with Mr. W. D. West, m.A. (Cantab.), in the chair. Some associate members were elected. Mr. H. N. Ganguli of the Fourth Year Class then read a paper on "The Origin and Evolution of Man." During the course of his lecture he spoke as to how Darwin's theory has changed the centre of gravity of our thought and the old idea that man is a "Special Creation" has given way to the scientific theory. He at first pointed out the help that human palæontology has derived from its sister sciences-Anatomy, Psychology, Pathology. Embryology and others,-in the deduction of the theory of man's evolution. He then mentioned the striking anatomical differences in man and apes, which distinguish both living and fossil forms. A study of life through the succeeding Geological ages and their probable evolutionary course was then taken up. He then described in detail the structure and history of discoveries of the various fossil ape-man and men, viz., Pithecanthropus or the Ape-man of Java, Peeking man, Eoanthropus or Piltdown man, Hiedelburg man, Neanderthal man, and men of the Reindeer age-in the order of their probable evolutionary course. In the end, he said that modern man is only the outcome of the intellectual perfection during Holocene or recent period. The lecture was accompanied with many slides, sketches and diagrams, depicting the theoretical figures of fossil men and their industries. When the lecture was over, the President congratulated the lecturer for his nice paper on a geologically neglected subject. A few questions were then answered by the lecturer and in the discussion that followed, the President, Dr. M. Chatterji, Dr. Das Gupta, and Mr. P. K. Roy took part.

The Twenty-eighth Anniversary was celebrated on Saturday, the 17 th December, 19今33, Mr. W. D. West, m.a. (Cantab.), presiding. The day's programme commenced with a song sung by a friend of ours. The President in welcoming the guests thanked them for their kind presence
and extended his sincere thanks to Mr. G. C. Chatterji, our late Secretary, who had come down from Dhanbad, specially for the meeting. He then welcomed Dr. Panchanan Neogy, as the chief speaker of the afternoon and called on him to deliver his address on "Chemical Industries and their indebtedness to Geology." During his lecture he said, "The Inorganic Chemist is entirely dependent for his raw products on the Geologist. Pure Chemistry is indebted for a good number of terms like isomorphous, amorphous, etc., to Mineralogy, and the foundation of StereoChemistry was in part due to the discovery of enantiomorphous crystal. The aromatic branch of Organic Chemistry is entirely dependent on the bituminous cannel coal discovered by the Geologist. Speaking about chemical industries in India, Dr. Neogy said that they are mainly dependent on Geological discoveries. India's resources of iron, coal, mineral oil, copper, silver, gold, mica, rock-salt, bauxite and kaolin, etc., are enormous but many have not been taken up from commercial standpoint and that coaltar distillation, which made Germany so rich, is practically unknown here. In conclusion he highly complimented the Geological Survey of India, for its splendid work and expected that in this country, with immense geological wealth, the talent of the budding geologists who are being produced every year from the College, would have due appreciation and surely they would find their place, only if they are properly backed by the Geological Survey, some of whose members were present there. Amongst other interesting items on the programme were a charming song by Mr. M. Bannerji, Flute play by another gentleman, and 'Sitar' play by Mr. Arunenda N. Tagore. Guests were treated to refreshments. After tea we had a show of interesting short-length films on a home movie projector by our President. The films shown were-(r) Vesuvius, (2) Ruins of Pompeii, and another depicting a fight between a snake and a mongoose. The meeting came to a close late in the evening with votes of thanks to the chair, our guests, and the Secretary. Amongst those who graced the occasion were Principal and Mrs Sen, Mr. and Mrs. R. M. Chatterjee, Mrs. M. Chatterji, Dr. P. Neogy, Dr. Q. Khuda, Mr. K. K. Sen Gupta, Dr. S. Dutt, Dr. M. S. Krishnan, Profs. H. Mukherjee, S. C. Majumdar, and others.

A group photograph of the members of the Institute, with our Patron was taken on the occasion at the beginning of the function and another at tea-table with our guests.

The Fifth Ordinary General Meeting was held on Tuesday, the 2oth February, 1934, Dr. M. Chatterjee presiding. Mr. A. Mukherjee of the Sixth Year Class read a paper on "Some Observations on the Mica Deposits of Koderma." The paper was based on materials collected during an excursion to the place and was a continuation of his former paper on "Mica"; the writer dealt on the mining, occurrence and marketing of mica; the local terminology used by miners to denote the different minerals and types of deposits ; cost of mining and the probable causes of the origin of inclusion and impurity of mica. The paper was interesting and the President thanked the writer for his efforts. In the discussion that took place all present took a lively part and certain questions that were put to the writer were fully answered.

The Second Special General Meeting was held at a very short notice of only an hour, on Wednesday, the 2Ist February, at 2-30 P.M., Dr. M.

Chatterjee presiding. Prof. K. K. Mathur, of the Benares Hindu University and President, Geology Section, Indian Science Congress, spoke on the "Recent Earthquake." He spoke from his personal experience during a visit to the affected areas in Bihar and explained that the nature of destructions, due to surface wave, is greatest, as also places where altitude changed suddenly. He spoke about the fissures which sprang up and the cause why sand was coming up. According to him, river bed is thrown up by accumulating sand issuing through crater-like necks. He also held that at Monghyr the damages were due to its being situated on alluvial deposits. He is of opinion that the 'quake has resulted because of a fault in the Great Boundary Fault in the Himalayas and on the theory of isoseismal, the epicentre may at the centre of the isoseismal be drawn through Katamandu, Muzaffarpore and Darbhanga, where destruction is greatest, and the direction of major 'quake is N.-S. He ascribes the destructions at other places to bad constructing materials and the nature of soil. He said that generally after-shocks may continue for a number of years and said that scanty knowledge of Geology has caused a scare in the affected areas and people suspect volcanoes from sulphurous and other fumes. At the end, some questions were put and answered exhaustively,

During the period under review, seven meetings of the Executive Committee, all in connection with the internal working of the Institute, were held.

Excursion: An excursion to the K.F. Rly. Workshops, Gholeshapur, Behala, was arranged on Saturday, the 24th November. About 20 members joined. On reaching the place we visited the nursery of Mr. G. K. Das, and were then taken round the workshop by the Officer-in-charge. Members were then treated to tea. Then late in the evening we were taken in a special train from Gholeshapur to Majerhat Junction, from where the party dispersed.

H. N. Ganguli,<br>Secretary.<br>Susil Chandra Ray Chaudhuri, Assistant Secustayy.

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## ACKNOWLEDGMENTS

We acknowledge with thanks the receipt of the following contemporaries during the current session:-

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The Gryphoon, Leeds University, England.
The Hooghly College Magazine, Hooghly.
The Durbar, Khalsa College, Amritsar.
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## REVIEWS

INTERNATIONAL ECONOMICS.-By R. F. Harrod, M.A. (Cambridge Hand-book Series), pp. $x+211$. Price $5 s$.

Perhaps next to the theory of money, the theory of international trade provides a happy hunting ground for many a crank. Especially in these days, when international trade is looked upon with suspicion by every nation, a clear restatement of the best elements of the classical theory of international trade is urgently necessary. Hence every economist must welcome this addition to the Cambridge Hand-book Series. It maintains the high standard of discussion that economists have come to associate with the Cambridge Hand-books.

The most remarkable chapter of the book is the second chapter, wherein a lucid statement of the theory of comparative cost has been given, illustrated by an appendix containing an easy mathematical treatment of the subject-a treatment that can be grasped by people of average intelligence without tears. Though the treatment follows mainly the classical lines, it sheds a penetrating light on some secondary propositions of the doctrine. The chapter on "Comparative Price Levels" might, with profit, be read along with a similar chapter in Angel's Theory of International Prices. In the chapter on "The Balance of Trade," the author has ably summarised the Senior-Taussig doctrine of the inter-relation between the rates of exchange, the level of incomes and the price-levels of the countries. The tariff problem has been inadequately dealt with. Though the subject is a much discussed one, yet it is a branch of economics where dissemination of correct knowledge is absolutely necessary. Now that the whole world is militantly protectionist, this shows the utter failure of the efforts of the generations of economists to teach the world a few fundamentals of their doctrines. Hence we feel that more space should have been devoted to the discussion of this problem. It is unfortunate that none of the Cambridge hand-books contains a good bibliography. The value of the book would have been much enhanced, if a good bibliography had been added.

There is one minor mistake in an otherwise carefully written work. On page 89, the author has referred to Dr. Eurizig's book as "International Gold Standard Movements." The correct name of the book is "International Gold Movements."

SEN.

THE HISTORY OF NORTH-EASTERN INDIA.-By Dr. R. G. Basak, M.A., Ph.D. (Publishers : The Book Company, Ltd., Calcutta), pp. $x+343$. Rs. 7-8-0.

We have the pleasure in introducing before our readers Prof. Basak's book, which is his thesis submitted for the Doctorate degree. The volume contains a comprehensive history of one of the most complicated periods of India's past (C. 320 A.D. -760 A.D.). Beginning with the foundation of the Imperial Gupta Empire, the volume deals with the whole history of North-

East India until the rise of the Pala Dynasty. The plan of the book is convenient and systematic, for it takes up one by one, the history of Nepal, Ayodhya, Kamrupa, Banga-Smatala, Orissa and Ganga Kingdom. The author has devoted one full chapter on the history of Nepal, which is generally neglected in the current works of the period. For the informations generally given, the author, himself a reputed epigraphist, depended mainly on inscriptions as also on numismatic evidences wherever possible; and it is this feature of the book which particularly evoked the praise of Rapson: " Your work is based on the only true foundation for Indian historical research-an intimate acquaintance with the inscriptions: and I consider that you have made some very important discoveries."

The book is not only an admirable collection of the informations already known to every Indologist, but also makes some very pertinent original suggestions. The author remarks that the history of the Gupta period requires a thorough revision in the light of what has been gathered from the copper-plates of Damodarpur, Baigram, Dhanaidaha and Paharpur. He even goes so far as to suggest, and suggest rightly, that the timehonoured ideas about the boundaries of the Gupta rule should be discarded to include Pundaravardhana and that the Gupta Dynasty extended to the early quarter of the sixth century A.D. through a succession of three or four kings after Skandagupta.

Some interesting features of the volume are the last chapter, in which the general tendencies and achievements of the period are summed up, the synchronistic take at the end, and lastly the very useful map for the guidance of the readers. Within a very short time of its publication, the book has been prescribed as an M. A. text-book in four Indian Universities, viz., Calcutta, Dacca, Lucknow and Benares. The get-up and printing of the book leave nothing to be desired.

OPARER-DHEU (in Bengali).-By Kamal Krishna Ghosh, b.A., Prof., Islamia College, Calcutta.

This is a collection of short poems consisting of translations of some of the most famous lyrics of English literature from the AngloSaxon period down to the Victorian era. Prof. Ghosh is to be congratulated on his new experiment. The translations show a good deal of power and have been carried out with care and in a spirit of fidelity to the originals. The metrical structure has presented the greatest difficulty, but for this the author is not wholly responsible: the gulf between the natural genius of the two languages is too great to be always bridged, and even a poet of the ability of the late Satyendranath Dutt could not always get over the difficulty. Prof. Ghosh deserves the thanks of all lovers of poetry for his successful reproduction of many of the gems among English lyrics in a more familiar garb.

> S. K. B.

THE STUDENTS' RAMMOHUN CENTENARY YOLUME (Publishers:
M. C. Sarkar \& Sons, Calcutta). This is a collection of interesting articles
from the pens of distinguished authorities. The volume has been divided into two sections, English and Bengali. Writer after writer has tried to reveal the real man in Rammohun who was the pioneer of so many movements, social, religious and educational. Many have tried to analyse the superhuman will that wrought miracles in the igth century, the actions that have aroused the fascinating admiration of posterity but met with derision and hatred among the contemporaries. In the volume we get all the facts of his brilliant career dealt within a learned manner; even some writers have communicated to us the human interest of his life. It is not possible to touch all the contributions in the volume in this small review. Mahatma Gandhi's message is in keeping with his eternal appeal to youth to try to copy the virtues of great men who have done good to this world. With the maximum economy of words, which is nothing but the reticence of art, John Masefield has very nicely expressed his admiration for Raja Rammohun Roy. The Poet in his inimitable style has revealed the greatness of the Raja by striking his wonderful performances against the " background of his age." Mrs. Naidu has given us a glimpse of the magnanimous heart of Rammohun, a heart that could not tolerate the tyranny of narrow patriotism. Sir J. C. Bose and Sir S. Radhakrishnan have sent short but illuminating contributions. Other articles from Dr. W. S. Urquhart, Mr. G. H. Langley, Dr. S. C. Sirkar, Dr. A. P. Das Gupta, Mme. L. Morin, Prof. N. C. Bhattacharya, Dr. P. G. Bridge, Dr. S. K. Chaterjee, bring out the all-round greatness of the man, as a literary figure, a social and religious reformer, an educational authority and even as a dry grammarian.

The Bengali Section also merits deep study. It opens with a nice poem from Tagore. The articles written by Sjts. Atul Chandra Gupta, Pramatha Chowdhury, Rai Khagendra Nath Mitra Bahadur, Kshiti Mohan Sen, Benoy Kumar Sarkar, Nalini Kanta Gupta, and Sm. Anurupa Devi will repay the time spent on them by increasing the reader's knowledge about Rammohun Roy. The poem of Srijukta Priyambada Devi is a fine tribute to one who is entitled to the respect and gratitude of the women of India for his wonderful efforts to remove from the Hindu Society the inhuman rite of the Sati. In short, the Centenary Committee may be congratulated for bringing out such an instructive and highly thoughtful compilation. Though it is ungracious to leave such a volume on a carping note of criticism, yet we are constrained to say that we expected a larger number of contributions from the students themselves.

MOHAN BENU (in Bengali).-Editor: Rabindranath Sen. (No. i, Baishak, I341). Published from 7, R. G. Kar Road, Shyambazar, Calcutta.

We have received a copy of this new Bengali magazine, which begins its bright career with the new Bengali year. The editor is already a well-known figure in the field of Bengali literature as the author of several popular story-books for children, and we are glad to see that in his new venture, he has scored an equally great success. Being meant primarily for young people, the journal is profusely illustrated with beautiful pictures, and contains interesting articles from the pens of such distinguished writers as Pandit Bidhusekhar Shastri, Dr. S. C. Bagchi,

Sjs. Bande Ali Mia, Kumudranjan Mullick and others. Poet Rabindranath has sent a beautiful message in verse, while Rai Khagendranath Mitter Bahadur has written a foreward introducing the "Mohan Benu" to the world of young readers, where this new paper is sure to outstrip many of its contemporaries both in popularity and usefulness.

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Nikhilnath Chuckravartty,
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## CORRIGENDA.

We crave the indulgence of our readers for the following errata which occurred in the last two (September and December) issues of the Magazine. No. I (September)-

Foreword, para I, line 2, delete into
Foreword, para 2, line 15, read sure for asure
Page 15, para 2, line 23, read Laurence for Lawrence
Page 25, para 3, line 30, read argue for argues
Page 27, para 1, line 6, read Frailty for Faulty
Page 42, para 1, line II, read national for natianl
Page 42, para 2, line 15, read thought for though
Page 67, para 4, line 20, read sedentary for sendentary No. 2 (December)-

Page 79, para I, line 5, read bequeath for bequeathe 97, para I, line 2I, read little move than one fiftieth for a little more than one-fith
Page 134, para 1, line 14, read Niels for Nies
Page 136, para 1, line 15, read somewhat for Somewhat
Page 136, para 2, line 20, read seen for sun
Page 137, para 1, line 1, read Niels for Nies
Page 138, para 1, line 18, read mass 2 for mass ${ }_{2}$
Page 138, para 1, line 23, read $H^{2} \mathrm{H}^{2} \mathrm{O}$ for $\mathrm{H}_{2} \mathrm{H}_{2} \mathrm{O}$
Page 139, para 1, line 8, read change for changes
Page 139, para I, line 14, read $U x_{2}$ for $U x_{1}$
Page 139, para 1, line 20, read physical for chemical
Page 141, para 1, line 13, read shot for shut
Page 14r, para r, line 19 , read $6.55 \times 10^{-27}$ for $6.55 \times 10-27$
Page 170, para 5 , line 6, read College for Collegt

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 তাহার আলোক বাহি’ দোঁছে পোর্রা চল্লেছিনু কোथা
 ব্যর্থত !-কে বলে এরে ? জীবনের অচল-শিখরে সহস্র ব্যর্থতা-ব্যथা অছাড়িয়|, মূরছেয়া পড়ে ;-
—বান্তবের ধূলি 'পরে পড়ে’ আБ巨 ধরার কক্কাল
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# শরৎচক্রেরে উপন্মাস 

## [ র্ব্ব-প্রকাশিতত্র প্র]

অধ্যাপক खীকুমার বন্দ্যোপাধ্যায়


#### Abstract

                          














 শরূচc্রের









 সজ্জাহ্ম্ঠাनই তাহার নারীীজ্রেন














































 করিতে ভুনিয়া গেনাম, আামাদের শ্রদ্ধাপুষ্পাঞ্জিি গিয়া পড়িন সেই সনাতন অতাচারীরের চরণপ্রান্তে, অর্র উপকারের্গ প্রতিদান ইইল চরম ক্বতন্নত। এই হেযতম মনোযৃত্তির



 পর্যান্ত কর্রিতে পারে নাই, এই প্রতিভাশানী স্বজাতীষ্স নেখকের্ন হত্তুনিকিপ্ত একীমমাঅ তীর তাহার ঠিক মর্ম্মস্থন ভো কর্রিয়াছে।






 করিম্রাছেন। সমাজের নোকদের ஈীন जসছায় ভাব ও আঅ্মঘাতী মুঢ़তার বিষ্য স্প্র


 মুখ হইতে অনেক গভীর সহাহুভূত্পিণ্ণ ও জ্ঞানগর্ভ কथা అনিতে পাই, কিद্ট তাহাদের

































## 




















 সरজ ধर্শ্বयू











夕







































 इইन।





























































 డেষ্য করিয়াছেন।



















 একান্ত ভবাবেগহীন，প্রস্তর－কঠিন আবেদন－অপরদিटক স্রেরের্র ব্যগ－ব্যাকুন， উন্মত্ত．অাবেগ－এই ছুই বিরুদ্ধশক্তির মাঝে অচনার হ্ৰদয় দ্বিধ卜－বিভক্ত ছইয়াছে। পিতার স্রেরেশের প্রতি প্রকাש্য পক্ষপাত ও মহিমের্ প্রতি স্রস্পষ্ট অবজ্ঞা বোধ হ্য়
 ইইতে সে পরিত্রাণ পাইন নিজের প্রবন ইচ্ছাশক্তির দ্বারাই। সে স্থরেশেরু ক্রেম निবেদनক জোর্ন করিয়া ঝাড়িয়্র কেষিয়া মহিমের হাতেই নিজেকে সমর্পণ করিয়া দিল—তাহার প্রেম প্পনোভনরক জয়্ করিল। কিক্তু বিবাত্র পর হইততই তাহার

 মহিমের নিঃস্নেহ，কঠোর কন্ত্তব্যপরায়্রণতামূনক ব্যবহার তাহার মনে প্রবন প্রতিক্রিয়া


 তাহাদের অহোরাত ঘাত－প্রতিঘাতে স্রেরেশের ধারণা জন্মিন বে，অচন্小া বাস্তবিকই মহিনের প্রতি অমুরক্ত নহে। এই প্রতীতিই ডাহার মনকে চরম বিশ্বাসঘাতকতার্র
 ছিনাইম্｜নইবার ছুঃসাহস সঞ্ष্য কর্রিন। কিক্তু ইহার পৃর্ট্রে গছিনের সাংঘাতিক পীড়ার সময় সে আর একবার কঢোর চিত্ত－দমনেন্র পর্রিচ্য নিষ্গাছিল—শেষমমহ্র্ত্ত অ万নার একটl সস্নেহ উদ্বেগ প্রকাশ ও প্রবাসে তাহাদের সঙী হইবার নিমষ্ত্রণ তাহার
 স্হরেশ তাহার ভুন বুঝিতে পীর্রিন। অБনাকক সে হাতের মুঠার মধ্যে পাইযাছে， কিস্টু তাহার মন ডাছার অধিকার－সীমার শত যোজন বাহিরে। ডিহরী প্রবাসের斤িন কয়েকটির উপর সমন্ত ভোগ－বিনাসের আয়োজন，সতৃষ্ণ ভ্র্রেমের সমস্ত উন্মুখতাব্র
 বসিয়াছে। মাঝে মাবে এই জযাট তুমার্রের মত কঠিন পক্ষাঘাত－গ্রস্ত জীবন্নর মধ্য


 মৃত্যুও বোধ ছ্য তত ভয্থাবহ নহে। এই চিত্রীইই সমত্ উপন্থাসের মধ্ধে কনা－কৌশবনর斤িক দিম্র্র উচ্চতম স্ছান অধিকান্গ করে।































 সুত্রাং উভ্্েরে মধ্যে ঢুননা চণে না।









 সক্কীর্তঅ আx


 সশ্পা ছাদ












## *াধার-আললা <br> 

## ছঃখ যখন এলো <br> বাঁধন ছাড়া ঝোড়ে| হাওয়া <br> বইলো এরোমেলো। <br> বাদল ছোল্লে সুরু <br> ভভয় পাও্যা মোর পর্যাণটুকু <br> কাঁপন্লা ছরু ছুরু। <br> ভাবনু বসে আমি <br> কক্মনে আজ এ বড় বাদল <br> বইবো জীবন স্বামী। <br> বললে তুমি ধীরে, <br> আসবে রঙীন আালোর নেশ <br> বাদল অঁঁধান চিতে।

সুখ্রের আকুল হাসি
ভভর্রলো আমার্ন সারা জীবন, উঠললা ঢোথে ভাসি; পেলাম বিপুল দান
ছঃখ রাতের রোড়ো বাতাস
আনননে সুখেরে বান্।
হারির্য় কেলে দিশা,
রইবে কি এ আরলোর মালা;
ভাবনু গ্গে দিন নিশ।
বनलে पूমি সাथী,
রুপের্ চমক্ নিভ্রে আবার
আস্বে অঁধীর রাতি॥


इলিভ্মণ চzটुাপাধ্যাय

## পরিচয়

























 जাকাজ্ম ছিন ना।

# তপপে-ভふ্গ <br>  

ছোট্ট একী পাথর——মীীর नীচে ককাথায় এতদিন লুকিম্রে ছিন কে জালে।

 রাণ্থেনি সে।


 সে ডেবেই চনে, চল্, চল্, বাইরে চল্।

 আবার ঝর্ণার ডাক আসে—চল্, চল্, বাইরে চল্। হৃ্ঠাৎ কি মনে ক্রে পাথর


 (नेই!

 ছর্বহ ※্ত্তি।

 サাড়িয়ে থাকে, ঋর্ণা আকারের ভঙ্গীতে তাদের গায়ে ঢ’নে পড়ে, ছল্, ছল্, ছনাৎ।
 জ্মানা করে, এই আনন্যযজ্ঞে তার প্ররোজন কতইক্য!
 দেবদাহির্ শাখায় শাখায্স সর্ সর্ শব্যে বাজে অতিনন্দন।



## তপৌ-ভঙ্গ

 একমাত্র সেই।



 থাকে।
 পাথরের মুখ্েে কথ্যা ফুটেন।, সে কেবন স্থির দৃষ্টিতে বার্ণার মুথ্যে চেট্রে থাকে।
 তার মাটীর ঘর অাবার তেমনই ছৃঢ় ভাবে তৈত্রী হয়। किन্ত সে কি তার মধ্ব্য নিজকে আগেরু মত়ই্ মিশিট্যে দিতত পারে ? সেই জান্ন!

## মাক্স'-অর্থনীতি *

## 




























[^31]












 नित्रে? गাহুবের স



 ब





























| ঐথম জন | 20 याना |  |  |
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| दिणীश, , |  | " | " |
| शृणीत्, | 80 , | " | " |
|  | ৮० थाना | র আাt |  |

य " निजीर " " " " ৩ " " "., " 20 " "









 প্রত্যেকেই প্রত্যেককর ব্যবহারিক মুত্যের बতিছ্ছবি। বিনিময়্রের্গ ক্ষেত্রে এগুনোকক বরে extended form of value. ওপরের্ন পাোযর ভেতরকার্ সম্ধন্ধ অন্য রকমেও লাখান বেতে পারতো-

 গম ছচ্ছে এচের ‘কদরেরে’ সাধায়ণ ‘ক্ণপ’। এরে স্থবিষা এই ভে-সসবার আগে






 সশ্মুयীন নী इ’লেও इয়েো চলতো কিन্তু এর একটা মুস্কিন হচ্ছে বে, গোটl এবং

 সমাজ যতই এগিট্রে চল্-্, এসব গণ্ডোন দ্র করনবার জন্য মান্য় ততই এমন একটা


 extended form of value এখन নীচচর आকার নিল:


















 आচে, তবে ধनिक অर्थनीতিবিৎদদূ মত Marginal utility \&l Supply-demand

























 জ্ত্তের তখনকার বাজার пার্গ পাব।














































## মাক্স -অর্থনীতি

ऊ্পৌকে বলা হ্য Universal money. মাকে মাকে টोকার currencyও এত বেড়ে যাষ্য বে, হাতে হাতে টাকা নিজ্গে দেনা পাওনা কর্| ভয়্কর বিরক্তিকর মরে হয়।
 চানান হ’ক! বে কোন লোকই সেই কাগজের টাকা বা নোটটর বাদবে রাজকোষ থেকে তার প্র্ন দাম পাবে। অর্থাৎ ১০) টাকার নোট নিচ্যে গোনে কর্ম্মচারী আমায্য
 এক ব্যাঙ্巾 থেবে অন্ঠ ব্যাঙ্ক টাকা ওঠাবার মুস্কিন লৈখl দিল। কাজেই তथন নাম্ল Cheque-এর চনन। একই ব্যাক্কে ডোমার আর আমার টাক্ থাকনে—তুমি যদি কিছু টাকার সাহাষ্য డनও আমার কাঢছ, তथন তোমার নাম লেকক ঢেকের সাহায্যে তোমার টাকা ম্যানেজার আমার নামে উঠিিয়ে রাখবেন।

ধनिক-সমাজে পণ্য ও টাকাব্র ব্রপ হচ্ছ্ছ সংক্ষপে এরকমই। বাটক্যর আড়ম্বরে आসল বস্ত্রেটিকে আবরূণ করা সম্ধক্ধে মাক্স ভয্সানক বিরোধী। তাই তিনি প্রথমেই বর্ত্তমানন ধনিক সম্প্র্যায়্যে্র গৌড়ার কথ্র পণ্য ও টাকার স্বক্রপ নিয়্যে মাथ ঘামাতে সুক্র করেন। जারপঢর ধীরে ধীরে তিনি সম্পুর্ণ ধনিক সমাজ্রের বিব্ল্যেবেে উপস্থিত

 гচ্ছে অতি সত্য ও কঠোর্ন বৈঞ্ঞানিক সত্যের ছবি-অর্থনীতির্ম আসন द্রপ।

## ভুল <br> 





























 কथl কওয়াই ঝাক্মার্রী। আমি ত’ তোমায় বারণণ কর্রতে আসিনি，শুধ্ জিজ্ঞেস করেছি কোথেকে Cদবে，一মন্দ কথাত＇কিছ্র বলিনি। বোটট প゙চাত্তর টोকা ভরসা， তাতে সাতটি প্রানীর ঋাওয়ী আছে，ছধ আছে，বাড়ী ভাড়｜আছে，কাপড়－চোপড়

 ছেনে মানুষ হবে না ？＂
＂করনা মাদুষ，কে বারণ কর়্ছ，＂বণিয়া গজ，গজ，করিতে করিতে তরঙ্গিনী भেখান হইতে উঠিয়্র গেনেন।

তরক্পিনী বে শিবু＜ক খুব ভাল চোবে ঢেখিতে পাব্রেন না তাহা হরিপ্রসাদবাবু আগেই জানিতেন। অথচ তর্গ্পিনী কখনও প্রকাশ্যে বিশেষ কিছু বনা বা অযত্ন কর্木， সেরকম কিছ্天 করিততন না；সেইজন্য অভিযোগ করারও কিছু পাওয়া যাইত না। কিন্তু শুরু বাহিরের যত্ন ছাড়া শিবু অর কিছ্র পায্স নাই বা অার কিছুর শ্রত্যাশাও করে নাই। বালক হইনেও সে এইটুকু বেশ বুঝিতে পার্যিয়াছিন বে বাছিরের্র ভোগস্ণ্র যতই সবন ছউক না কেন，ভিতরের সছিত তাহার আদ্গী কোন সংশ্রব নাই। সেইঅন্ঠ সে যতট। পারর্র তাঁছাকে এড়াইয্র চলিত，—পারতপক্ক তাঁছার বা ভাইবোনদদর কোন সম্পর্ক থাকিতে চাহিত নो। इর্রিপ্রসাদবাবু তাছাও নক্ষ্য করিয়াছিলেন এবং বতটা পারিতেন লুকাই⿰㇇卜亅 লুকাইয়া তাহার অন্তরের্গ অভাব দূব করিচত চেষ্টা করিতেন।

भেদিন সন্ধ্যাदবলা इর্রিপ্রেসাদবাবু তাহাকে ডাকিয়া চুপি চুপি বপিতেনন，＂所খ， শিবু，তুই ষथন আরও পড়তত চাচ্ছিস，তখন পড়，অমি তোকে অ৮ই，এ，টl পর্যান্ত
 হটো ছেবেকে পড়াতে হবে，টাকা কুড়িক দেবে，আর બোর্র মায়ের্র দরুণ বে इ’একথ্থানন গয়্যন বাকী আঢছ তাই বিক্রী কর্রে তোর খরূ চালাব মনে করছি； কিট্ট তুই যদ্গ আই，এ，তে না স্কনারশিপ পাম্，তাহঢে আর অমি বি，এ，র খরচা দিতে পারব না，আগে থাকতে বনে দিচ্ছি। আর ঢেখ，অমি दে ঢছেে পড়াই ত’ যেন বাড়ীতত বলিসনি কাউকে।＂



 তাহার্ এমৃনি ভান बাগে！ক্লাসে সকনের অাগে Gস অমিয় চক্রবর্ত্তীর সহিত ভাব





























 র্রার্রে সহিত ক্ধা কহিতে ষাওআা-

## बलन

3) 


 নাই। ऊেদিন মিস্ রায় সেই বইটি बইয়া কনেজে অসিয়াছিনেন। তাছার অদম্য ইচ্ম। ₹ইন সে ঢাঁার নিকট হইতে বইটট ছই তিন দিনের জন্য চাহিয়্রা লয়। এজন্ঠ তিনি যथন তাঁহাদের কামরা ইইতে ক্লাসে যাইবার উর্ছেগ করিতেছিতেন সেই



 गिস্ রাস্স একটু হাগিয়া বইयানি তাহার হাত্ দিতৈই সে কোন্না গাতিকে ছুটিয়া পলাইল;—যাইবার সময়্র তাহার ঢোটে পড়িন্ন বারান্গার ধারে করেেকটি ছছনে

 মতন অবস্থ। তাহার ছিল না, কাণ দিয়া ব্যন তাছার আাগুন বাছির হইতেছিন।

ইছাই তাছার মিস্ রাক্রের সঙ্भে প্র্রথম ও শেব আলাপ। বইযানি ফেরৎ দিবার্ন সময্র সে আর্ নিজে দিয়ী আসিতে সাহস পায় নাই; কঢেজের দারোয়াননৈর হাত্ দিয়া পাঠাইয্রাছিন।

টেটেটের সময় তাহার সব উশট পালট হইয়া গেল। সে বেচার্রী বাড়ীতে ৎকানদিন

 থাককক, সে পাড়াত্ও কোনও কাক চিন বসিতত সাহস কর্রিত না; ইহার্র মধ্য্য পড়াখ্ন ত’ দূরের কथা। তাহার উপর হর্রিপ্রসাদবাবুর রাচত্র অসিতে দেরী হওয়ায় বাড়ীর্র অধিকাংশ কাজই তাছাকে করিতে হইত। इর্রিপ্রাসাদবাবুর রেজাজটাও ইদানীং বড় খারাপ হইয়া গিষ্াছিন, কাহারও কোনও জ্রীট দেখিতেই বকাবকি স্হরু কর্রিতেন; কিন্ট্ তরর্পিনীর নিকট অসর জমাইঢে না পারিয়া হতভাগ্য নিরীহ শিবুন উপরই তাছার শশাধ নইত্তন, যদিও মনন মনে বেশ বুধ্পিতেন বে তাছাকক তিরস্কার কর্গ তাঁহার পক্কে খুবই অন্মায় হইতেছে। তাই শিবু কিছুই পড়িয়া উঠিতে পারে নাই। সে ঠিক করিয়াছিন টেষ্ট হইয়| গেনেই বাবাকে বলিয়্য তাহার মামার বাড়ী রাজপুর্র চিিষ্র্য যাইবে, সেথানে তাছার বিপ়্ীী ও অপুল্রক মামাব কাছে হইমাস থাকিয়া পড়া তৈয়ারী করিষ্র बইবে। তাহার মামার অবস্থ। অবশ্ঠ ভাশ নহে, তবে ছইসাস থাকিতে দিতে তিনি নিশয় পার্রে। কিক্তু কোথ্খ হইতে বাণের জন আসিয়া সব ভাসাইয়্র দিল।


 इইঢে শিবুর ডাক্তার্রে বাড়ী লৌড়ান, ছাত্রে বাড়ী পিতার বদান পড়াইত্ মাঙ্যা,













 নইচু পারিত।-













তাহাকে পড়িতে লেও্যা ইইত, তবে ‘ওদের’ ঢোখ টাটাইঢেও হরিপ্রসাদ বাবুর কি
 কতঋানি। তাই সে চুপ করিয়া রহিল।

মাস তিন্নক হাঁটাছাটি ও তোষামোদ斤র পর শিবু চল্ঞিশ টীকা মাহিনায় টিকিট

 না থাকাতে তাঁহাদের যাইবার ধ্রসছ্গা তাগগ করিতে হইন, এবং শিবুও হাপ ছাড়িয়া বাঁচিন। যাইবার সময় শিবু<ক একনা যাইতে र্য নাই। অনেকগুলি অচল ট্রাঙ্ক,


 नগদ চারিশত মুদ্র এবং ছয্রশত মুদ্রার গহ্না নইয় তাঁাারই नूর সম্পকক্কর এক
 স্পপাত্র অর্পপ করিমাছিলেন। হরিপ্রসাছ বাবু প্রথম আপত্তি করিনেও শেষে এই ব্যবস্থাই মাथা পাতিয়া লইয়াছিেেনন, ছছনেটারও ত’ বিদদশে একজন সেবা যত্ন করিবার্র बোক দরকার !

 অতটুকু জীবনের মধ্যে দুই প্রকার নারীর সংশ্রবে আসিয়াচে, এক তরপ্পিনীর দন,


 চাশাইতে পারারা যাস্রনা।
 এथানকার সহিত পরিিিত হইতেই ত’ তাছার ছয় মাস কাট্টিয়া গেন।

তাহার ককোয়াটার অন্ঠ সকরের হইতে একদু দূরে, খিঞ্জি ঘিঞ্জি বাড়ী ও
 অছছ। মাঠের শেষে পাড়ের মত বনের শ্যামন ছায়া অস্পষ্ট দেখ্খা যায়, দিকচক্রবাটনর মত। মাঠের মাবখানন কর়্েকট্ট। তানগাছ একসল্গে জোট পাকাইয়্র দাড়াইয়া অ下ছ। ছপুর বেনাটায় Cকানও ট্রেণ নাই,—শিবুন হাতে তখন কাজকর্ম্ম থাকে না। পাশের ঘরে অন্নপ্ণা বুকের্র উপর একটা বই ஏইয়া অকাতরে ঘুমাইতে থাকে,-

























 সুছিতে মুছিতে ‘্ঠেশনে অসিম্যি উপস্ছিত হইন।







নতনের্রে টিকিট চেক করিতে করিতে তাহার মনে হইইল মহিনাটিকে সে যেন
 মিস্ ব্রায় এयানে? ওসাহেবটি বোধ ছয় ঢাঁছার স্বামী,—স্বামীর সছিত ববড়াইতে
 টিिি-চেকার, ঢাঁছার টিকিট চেক করিতে অসিয়াছে !-

অथচ এইত' কঢ্যেক বছর আগে তাহারা ছইইনেই এক যায়গায়্য ছিল,—একই


তাহার কাণ হইট। সহসা লাল হইয়া উঠিন, সে তাহার "টিকেট এগ, खামিনার"
 পারজ্মুন আমায়?"
—বनिয়্যাই তাছার মনে ছইন সম্মুশ্v কোনও ভদ্রমহিনাকে এর্র্পপ সম্বোধন কর্রা তাহার পক্ষ বে নিতান্ত অভর্রোচিত


মহিশাটি বিস্মম্ন ও বির্রক্তি নিশ্রিত স্বরে কহিনেন—"לক না চিন্তে পারছি না !"
কোনও গতিকে "আনি কনেজে আপনার সষ্গে পড় তাম্" কথাটা জড়াইয়া জড়াইয়া বিিয়াই পে তাড়াতাড়ি গাড়ী হইইতে নামিয়া পড়িন।

 মনে পছ়়েনা, তর্গিনীও কবে আসিয়া সংসারের ভার बইয়াছেন তাহাও তাহাব্র মদন নাই। বাড়ীর নিকটট হন্ডে দোতন্ন বাড়ীটায় তাহার ছেনেবেলাকার
 দিনটা ঢাছার বেশ মনে অছে।
 কఁনজ, অমিয্র চক্রবর্ত্জী, বুড়| শঙ্করবাবু, ররনা রায়—আচ্ছ অমিয়টা এথন কি

衣তেন, ऊাঁহার সহিত আলাপ করিতে গিয়্র উাছাকক কি বিড়ব্বনাটাই ভেগগ কর্রিতে


 প্রেসার্রও হইতে পার্রিত!
 जদ্রের্রে একটl কুনী একরাশ মোটমাট নইয়্র একটি ভদ্রনোকের সহিচ বচ্স ম্ম











 "भावि भौढ़ए !"













 —घা হবার ত্’ হয়েছে ; এ্থন ভাবুন কি করে সাত্রেবকে খুনী কর্রে পারবেন, নচেঙ বুঝতেই পারছেন এই ছর্র্যুযগের বাজারে চাকৃরী গৌে বৌ ঢছঢে নিষ্রে গাছতনায়


 সামনে যান ।" বলিষ্াই তিনি তাড়াতাড়ি চলিয়া গেনেন।
 ভूনিষ্| কর্ত্তব্য কার্য্য কর্রিতে ছুটিল।

# ভৃমিকল্প <br>  











 শামি অানাইতি চাই।











 रोराद गून कात्रव।

 একীী ক্সুদ্র কারণ এই বে আগ্গে্য-গিরির্ন ভীষণ ও সশব্ধ বিদারণ, যथা ১২৮৯ সাতে "ক্র্যাকাটোয়া" এবং ১২৯৪ সাজে জাপানে "ব্যানডডাইসান্"। উক্ত কারণে যে সকন

 ভূমিকম্প হইতে পার্র, যथl ১৩০৮ সানে "মন্ট্, পেলী"। আমাদhর ধারণী इয় যে ভৃমিকম্পের উৎপত্তিই আগ্নেম্র-গিরির বিদারণ; কিক্তু উক্ত ছুইটীর ছৃশ্যু যদি পরস্পর্র


 यুক্তি-সপ্পত ও প্রধান বনিয়া ধার্য্য করা হইয়াছে। আমরা আনি बে পৃথিবীস্থ ছানের্র উপরাংশ ছিদ্রের দ্বারা অনেক ছোট কিষ্বা বড় পির্ডে ভীগ করা এবং ঐসব ছিদ্র


 গাত্রে ষে কম্পন উৎপাদন इয় সেই কম্পানই ভূমিকম্প হইঢতে পারে; অথবা কোন

 পারে।

এইচ, এফ, রেইড-এর মতান্যাজ্রী ইহার উৎপত্তির আধুনিক মতামত এই বে
 আঘাতের কারণ নহে। তিনি বনেন বে কোন স্থানে একীী াম্বানপ্বি রেশায়-বেঝানে বহুকাল ইইতে ভূমি সন্নিবদ্ধ থাকায়—শক্তি ক্ষীণ ছইয়া আসিয়াcছ সেই রেখার

 ইইতে পারে।

 শ্রেণীবদ্ধ করা যাইতে পারে অবং ঐ্রুলি পৃথিধীর ভিন্ন তিন্ম স্থান बধিকার কর্বিয়া




 पृत्विकण্ण क़्र।



 অ氏िशिত।



 ＂मাইস্মোগ্রান্＂বলে।









 न丁र ：－

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\begin{aligned}
& \text { ১১২৬—সাচে—দিল্লীতে। } \\
& \text { ss80-"—কলিক্রিতাম্য। } \\
& \text { د১৬৮-"——প্ব্রবন্গ এবং অারাকানোপকৃচে। } \\
& \text { ১دะ৫ー"一个চ巨ছ। (Cutch) } \\
& \text { ১২৯১-" ——কাশীরে ఆ বঙ্গদেশে। }
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> :৩শー " —পেণুতে।

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\begin{aligned}
& \text { j099—"——কোয়েটায়। }
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অতএব দেখ্খ যাইতেছে বে উপররাক্ত স্থানগুিーবেখানে ভূমিকম্প ইইয়｜

 এবং এই শক্তি ক্ষীণতার এ্রমাত্র কার্রণই হইন হিমালয়ের গঠন। বর্ত্তমানে আমরা দেথিতে পাই বে আাসামাঞ্পেন ভূমিকম্পের প্রককাপ খুব বেশী এবং ধুবড়ী অঞ্চনে ভূমিকম্প অনেকবাঁর হইয়া গিয়াঢছ এবং বর্ত্তমাননও মাকে মাঝে ছইতেছে।

ভূমিকম্প बামাদের যথেষ্ট ক্ষতি করে। কম্পন यদি কিছ্র সময্রের্র অন্য ছায়ী







 কোন ক্ষেত্রে নদীও উৎপন্ন ইইতে পারেーযসি ফাটন বিশেষ বড় ও গভীর ইয়।

টপসংহারে বনা যাইর্ত গারে，বে সকন স্ছান্রে ভূমিকশ্পের্র প্র＜কপপ বেশী সে সব স্থানে কাষ্ঠনিস্সিত ঘর，বাড়ী তৈরী কর্রিষ্য বাস করাই শ্রেম্ন－কার়ণ





 यদি কিছু इ্য তবে মাত্র এক দিক ইহার্র হেনিয়্রা পড়িতে পার্রে এবং ইহ তত


 জাপানে ভূমিকস্পের প্রকোপ খুবই বেশী। স্ততরাং সেথ্ধানকার ঘর, বাড়ী ইতাসি
 কারণ উছাতে তত্রস্থ অধিবাসীরা নিশিচ্চেন্তে বাস করিতে পারে এবং বিপাঁ ও টবষমিক ক্ততির সম্ভাবনা অতি অন্প।

## পৃর্ণিমায়



आधि शीनिमाद,





आজি তব বাসর শয্যায় ?

পুর্ব্বাশার কণক তোরণে

অজি মুগ্ধ মতন।
धানরমীনন ধরিত্রীর শান্তিময় সুষুণুু ঘেরিয়া
 তা'রি কোন স্রোত বাছি গাযনর তরণীখানি লঢয় কে গো তুমি এ্নে মোর ऊৃদঢয়র निভৃত निলয়ে

এ্নল আজি ঢমার অর্দ-স্হু কল্পনায়!

ঝ'রে পঢ়ে যুথী চার ছড়াঢয় স্ভবাস, সরসীর স্বচ্ছ নীরে কাঁাপে চাঁদ

आবেবে বিহ্বল
नারিকিন্ন পত্রশীর্ষে তাই তার কিরন সম্পাত
নাচে আজ্জি পুनক উজ্ঞ্মল ;

নব অম্ষরাগে;

# নাদী তা’র ফেনিল উচ্চারে 

ট四সিত মছির্ন উল্পাচে
রহে তব্রभিতে
অनবছ উদ্ছাম সঙ্গীてত
नীলায়িত ন্ত্য ভঙ্গিমায়।
অদূ＜্রের ঝিল্লী রব স্তক্ধ করি নিশীথথর গতি
ঘোষে মৃছমম্র্র－স্বনে ঢোমার আরতি
মহা ম্মীন শাষ্ত ধরিজীন্র
ব্যান ভাপ্গ ；ক্রমে রহি স্থিত্র
ষীप্রে যেন স্বপঢন মিনায়।

আমি আজ এ নিশীথে একা বসে আছি বাচায়ান
নেট্যে দূর f 斤গগন্তের পানে
এপার্রে নদীতটে বনের ছায়ায়
জ্যোৎস্নাধারা कী মায়া জাগায়！
नদীত্টট ফফन－রুভরেলা
কা’রি সাহো লুরোচুর্রি খেলা
করে ছায়া অালো
ক্ষてণ হোঝ্য！——ওই যে মিলাতো！
দুরে，ভেथা অসীমের দেশে
আকাশ ধরীীত্নে মিশে
তা’রি স্মূম্ম মোহন র্রেথাশ্য！
এ পারের্ন নিজ্রাঘেরা গ্রামে
রাত্রির কুহক ছায়া নামে ；
थाকি थাকি थাকক
দূর্রে কোন নিশাচ্প পাথী
কুহব্রে্্ স্বর্রে উঠে ডাকি
निब्रियিলি গাছেন্ব শাখায়।

জ্যোৎস্নালোকে ভাসি
বিমান বিলাসী
কুন্দ-कু্র অসংখ্য বলাকা
গগগনের্র পটট যেন কত ছবি আাঁকা
কোথায় মিলায়ে গেম!
निশা হয়ে এল অবসান;
ছূর হ'তে উহাদের ক্শীপ কলতান
শুৰ্থে শুন্থে ব্যোমে ব্যোমে সেই স্বর গেল বিস্তার্নিষ়া
б্রক্গিয়া হিক্লোশিয়া, গেল কমে বিলীন হইয়া
অতীঢের তিমিরাক্ধকারে
যুগে যুপ্গে যাহার ভাগ্গারে
সধ্চয়িত ভাযার সম্পদদ
সৃপ্ধিন্ন আদিমকাল হ'ঢে ;
গেল্ মিশি স্তক্ধ নীলিমায্র।
আকাশের্ন তারাথুলি যত
निप্রাইীন প্রহরীর মত
उন্দাললসে জাগে
আজি এই স্ক্ট রাত্রিভাগে ;
উহাদের স্থখছঃখ হাসি অশ্রু যত
আমাদেবই মত
निম্মেে নিেেষে উঠ
নিমেষে নিমেষে যায় টুাট
বুদু [দের সম ; এ বারত
নিশার্তের जুকতার্রা মোর্রে কহিন তা’
শুর্রোজ্ছল অালোক-ভাষায়্য।
मায্যাবিনি! অi্ি ত্ব এ মোহিনী বেশ
কালি আঢে. সিলাধে নিঃশেব


## রবীক্র্প-পর্রিম































 এই গা্লে একটो চমৎকার realistic touch আছে। Keats-ভএ "Ode to







ডাঃ সরসীলাল সরকার্র আাোচনাম

 Шদৃष्大ेत পরিহাসের স


 मब बक एत्र।
 সम्णाॅका।

[^32]


## যাযাবর

## কালিদাস লাহিড়ী--ৃृতীয় রার্ষিক ( কन्न)

 বিশীর্ণ মনিनकाध, হাসিতু ব্যথায় ভরে বুক।

夕ুচ্টিত না পার্র, আঘাতে শ অধা इ’য়ে
ভো্প পড়ে হাছাকার ক’র্র।
$এ$ य্যथা বাজ্ৰন প্গcে ;




Пौর্খ দিন দীধ্ধ য্রাত্রি-লোে
কত পথ এলেছে সে পশাঢত কেনিম্যা,

 কত র্রাত্রি অశ্ধকার হাসিয়াছে তౌ’র পাচে চের্ৰে,



কর্রেনি ষীীার্ কডু।
কচ হাসি, ক্ উপহাস, নাঞ্রনা-বিদ্দ্প

যাযাবর, যাষাবর-বেশ্শে ফির্যিযাছে দেশ-দেশান্তর।
এই খু পর্রিচ্য তা"র?
জানেন জগৎ—জানিতে চাছেনা সেखে
টপানन্দ ছিল একদিন গৃহহ্থ বৃট্রিবাসী

## তাহাদেরি শ丁।


 সাদরে ডাকিত তা’রে।
जাহারি মাধ্বী, কোমল মাধবী-बन তাহারি ত’ ছিন।
 \&ীর़ ধীরে হহ় অগ্রসর, সঞ্চিত সে দীর্ষ্বাস বুক टেন্’ আসিছে বাহিরে।

लে মাধবী-बब
উপানஈ-বৃক্ট্রে সযতন্ন জড়াইয়্র ষীতে
ষুটাইত আनক্সের্য কত ফুল সৌীযভ অর্রিয়।

বিধাত্রে সাধ্ে নাই বাদ
কাহার্রা ত’ ঘটৗয়নি কোন্নে পরমাছ।
 নোনুপ-cোিিছ-জিম্ম প্রসার্জিয় জনপদ 'পরের,



কার্নি মাঝে এক উই্কশ্ষাস
কোমল সাধবীनण निন ऊকাইয়।।
ঊপানन নদীতীরেরে চিতানলে দিब বিসর্জন।

অবসন্ম শ্রান্তপদদ ষিরিলি বুট্রে



সেই হতে যাযাবর সেবে।

 যাযাবর ত্বু চলে, অবিশ্রান বির্রানবিহীন।

বহ্ףদিন বহ্হ্রার্রি শেষ্ে
বহ পथ কর़’’ অতিক্রে
यাयাবর ফির্রিয়াছে সেই নদীতিরে
ब্রৌ্য মাধবীল্ত नেছে বিসর্জন।


অার্নি cকালে পজড় নুতীऐশ্য।

নनীতীর্রে প্রতত নামিছে;

आককাশ্রে অারা সবে একে একে নিত্তেছে বিদায়,


উপান্দ উ氖न চহকি’-

ওই ওই গেন মিনাইয় !!


পরিচিত পৃথিধীর্রে যাষাবর দেখিন চাছিহ্রি,-


জनতনে যাযাব্য-বেশ্র



## মাব্স'-অর্থনীতি

## গিরীক্দ্রনাथ চক্রবর্ত্তী-তृতীয় বার্ষিক ( কन्न)

## মूलধढन অঢর্থে ব্রপান্তর-


























 আনবার জন্যে। তাই প্রথম দফান ( টl-প) যে টাকা খরচ তাকক খরচ না বনে
 आ'সছে পরর’**

পণ্যের প্রচন্নের ক্রণ্ে টাকাটাই ছ’বার একহাতে আসে। একহাত থেকে পণ্য দ্রেরে চলে যায়, পরে টাকার জ্জোরে সেই শূন্ঠ স্থান অন্য পণ্য দিত্যে পৃরণ কয়া হয়়। ইহার বেশী পণ্য বিক্রেতার সম্বক্র নেই। সে যদি ৩ টাকার্র ধান বিক্রি করে তাই দিয়ে পাট কেনে, তবে তার্থ নিজের প টাকাব্র পরে কী অন্সস্থ হচ্ছে দেখবার তার
 সম্পুর অন্ঠ ধরণণের। পণ্যই এथানে ছুবার ঘোরে। টাকার্র বদনে পণ্য কেনা হয়সে পণ্য আবার ঢেওয়া হয় বিক্রয় করেনে টাকা আনবার জন্থে। এখানে পণ্যের্র কি হচ্ছে না হচ্ছে ব্যাসাষ্ীীর তা লেখবার দরুকার নেই। টীকা তার কাছে ফিরে এনেই হ’ল। বেপ্যান্ত টীকাটl তার কাছে ফিরে না অসছে সে পর্য্যন্ত "টা—প-ট।" চক্রও শেষ হচ্ছে না। পণ্য বিত্রি করে টাকা পাওয়্য় চাই তবেই এই চত্র শেষ। "প—টা—প" চর্রে গম বেচে হয়ত লোকে কাপড় কেনে; কাজেই সাধারণতঃ তা একই দামের হয়। গম বিক্রি করে তাঁতিকে ফঁঁকি দিয়ে অল্পদামে কাপড় কিনে ছ'পয়সা বাঁচারনার ব্যাপার
 মূল্যের অন্য জিনিষ কেনে; তাতে তাদের দিক থেকেও কোন কতি নেই—কেননা লক্ষ্য
 ব্যবসায়ীর কাছে আসে তবে এ চক্রের কোন প্রয়োজনীয়তাই ছিন না। "ট|-প-টা" চক্রে বে টীকাকে প্রথমম চালায়্য তার লক্ষ্য থাকে সর্ক্রলা ফেরাবার সময় যাতে বেশী
 এই বেশী পঞ্চাশ টोক না থাকলে কার্যবারের কোন অর্থই হোত না। যে টोকা দিয়ে ব্যবসাত্রী কাজ আরন্ত করে তার শেবে গেই টীকা অর কেবল একল্না থাকে না, সক্গে
 ও তার সক্পে যুক্ত নাভ ( না)। আসল টাকা ও লাভ<কে একত্র করে ( অর্থাৎ ট।+না)
 উপরি লাভ কর্া হয়, মাক্স’ অকে বলেছছেন, "বাড়তি মুন্য" ( surplus values )।

[^33]









 (capitalist)। ধनिकृদর কাबই হচ্চ্হ টাকার্র জনে টাকা यাড়ান্।। লোকের
 বাড়াবার্র দিকে।


















 বাবসায়ী সশাজকে (Commercial Society) আাদশ্শ কবেই $এ$ मতবাদ গঢ়ে








 지 ভून















[^34]
 द्याष्या क्ञा बगت्ड।





























## মার্স-অর্থনীতি

প্রত্যেক জিনিষকেই বিনিমক্রের ক্ষেত্রে প্রবেশ করতে হবে। অথচ গামরা আগে দেবে এলাম বে, অ্ু বিনিময্যের ফলে বাড়তি-লাভের উদ্বব অসষ্ভব। বাড়তি-মূল্য পেতে

 সশয় বুঝতে পারার যায় বে, এদের ছুটোরই সংশিশণেরে ফলে বাড়তি-মূল্যের উদुব।

জিনিষেরে দাম হ্সিসেবে টাকার ব্যবছার করবার সময় কোনও রকমম টাকার आকার বাড়তে পারে ন।। সে টাকা সর্ব্বণা ক্রীত জিনিষ্ের সমান দামই দেখাবে।
 টাকার আকারে বে পুঁজি থাকে जা থ্থেক কখন্না লাভ হতে পারে ন - [In the form of money.....capital is productive of no profit ]। आবার "管—প—ট|" চক্রের শেষাংশ, অর্থ্রৎ "भ—ট"" চক্রেও আকারের পরিবর্ত্তন ঘটতে



 এ পরিবর্ত্তন সাধন কররত হ'ঢে বাজারের এমন একটা জিনিষ খুঁজে বের করততে হয় যার নিজে থেকেই নূতন ‘মূল্য’ জন্মাবার ক্ষমত আছছ। তাহনে লে পণ্য সঙ্তোরের্র

 পাচ্চে সেটুকুু তার পাবার ক্থা না इ’ঢেও পণ্যের বিশেষ্য গুণ আছে বনে "বাড়তি-মৃলা"
 আছে। সেটট হচ্ছে মানুষের ‘‘শ্রম-ক্ষমত"’ (labour-power)। কোন বাবহারিক

 जোগ.করার কনেনই বাড়তি-মূল্যের উদ্ভব।

শ্রম-ক্কমতার সমস্ত 丆্পপ এবার জাল করে ঢেখখ যাক্। শ্রম-ক্ষমতাকে অন্ঠ সব পণ্যের মতই বাজারে পেতে হ'ণে শ্রম-ক্ষমতার মালিক এবং তার্র ক্রেত এদের্ম পর্মস্পর সম্মুथौन হ’তে হবে। বর্ত্তমান সমাজ্রে আইনের চক্ষে সব চেত্রে বড় কথ্থ হচ্ছে "‘অর্থ-
 ভাবে ইচ্ছামত ক্রেতারর সক্গে চুক্তে কবততে পারে; এতে বাধা দেবার কেউই থাকে না। সেই রকম শ্রম-ক্ষ্তাককও যথন পণ্য रিচেবে বাজারে আসত্তে হবে তখন এর্মালিক






















做 1*


 স্বচ্ছন্দে চালাতে পারে, কাজেই এখানে দশ আনা কি আট আনাই হচ্ছে তাদের মাহিনা;

[^35] শ্রষিকদের মাহিন। ভারতবর্ব্বের শ্রমিকদেয় থেকে অনেক গুণ বেশী দিতে হয়। শ্রমিক
 পারে। মাহষষ মাত্রই মরণশীন। শ্রমিকদের একদিন না একদিন মরুতে হবেই। কাজো তার মায়ুগীয় যদি অন্য শ্রমিকর্রা অর্ত্তি না হয় তবেই ধনিকদের ষ্বার্থহানি খটে। কনকার্রানায় যদি সর্ব্বদা খাৗুয়ে শ্রমিক না পাওয়া যায় তাহনে ধনিকদেরই লাভের
 শ্রিকেব্র মাহিনার সঙ্গে তার স্ত্রী-পুত্রের ভরণপৌষণের খরচও নিহিত থাকে। ছাছাড়।
 শ্রেণী যদি কन मম্ষক্ধে সব কিছू না জানে তবে অনেক সময় উপযুক্ত উৎপাদন হয় না।
 ঋরচఆ সাহিনার ভেতর থাকা দরকার। শ্রমিকরা বে কাজ অরন্ত করালেই যাহিনা

 তা ঘটে না। শ্রমিকরা আঢগ কাজ করেরে তার্পরে তাদির বেতন পায়। এক কথায় শ্রিকর্রা কতকটl ‘আগাম’ কাজ করেে। যতক্ষণ তার৷ কাজ কর্নে সে সময়ের ভেতরেই गালিকের্ জন্ঠ যতকিছু অপ্পীপ্য পৗওনা স্থষ্ট করে। ‘বাড়তি-মূन্যোর’ জন্ম এখাে। টাকা দিত্রে নোকক শ্রু-ক্মতার্য পণ্য কেনে, ( ধরা যাক্ তার সমান বিনিশয় ஈােমই) কিল্ত সেই পণ্য বিক্রি করে ষখন অাবার টাকা করতে যাবে, তার মৃ্ধ্যাই তার কাছে


 की এবং कि कि निয়মে ত निয়ন্ত্রিত ছয়।

## শ্রাত্র্পণ*

## মহবুবর রহমন—চতুর্থ বার্ষিক ( কলা)

দুর इ’তে শেষ তোশার পার্রে শ্রণাম র্রেথে যাই,
 বুক্ চির্র যায় বণ্তে নারি আর বে তুমি নাই, আাছ্কে আকাশ অ্যুই ক্বের অख্র-বাদল ছালা!
ম্বजাব ছিন কামিনীরও চেয়ে কোমনতর,
বদন চির উজন হাসির নিন্র নিথিল-লেsা-









জানিনে কোন্ প্ণু্চ-ফলে জন্মেছিলে পূcে, মর্ত্য इ’ন ম্বর্গ তোমার ম্র্পপর্ণশ লভি,




# রবীক্র্রনাথের ৎ্পেমের কবিতা 

অধ্যাপক खীশুবোধচক্র সেনগুগু, এম্-এ, পি-আর-এস্




 সমকক্ত দাবী করিতে পর্র। বনা বাহ্হন্য, এই সহ্মৃ্ধিমান কাব্য অমর্রা পাই








 ऐইাে না।



















 बই তद্জী বিস্शৃত इইবেন না।"






$$
\begin{aligned}
& \text { उृक्फ|वनाण, }
\end{aligned}
$$



मीन सब्छागाभी बई नउनाप्रोफ्यद्य









 সীমা নাই। রাষ্ট্রুনতিক, সামাজ্জিক অথবা অধ্যাण্মিক তত্ল ব্যাখ্যানের উর্দ্যে্যে
 তथা!্য তত্প্রের "পরাপ্রক্বতি" অনেক যাম্রগায় চাপী পড়িয়াছে। প্রাণবান্ কাব্যে
川াসত্ব করে না।


 ঢাহার কাজ্কিতকক কামন্| করিতোছে। তাছাcক সে পাইয়াছে এক্িন অকশ্মাৎ





 ককান মুন্যাই নাই। তাহার দ্যিতকক পাইতে হইবেই; না পাওয়া প্য্যন্ত ख্রাত্তিও
 এই শাত্তিহীन একাগ্রন। কাব্যেব্য দিক্ দিয়া ঢাখিত্ গেচে, ইহাই পদাবনী
 সাছাय্য করিয়াছছ। পূর্ব্বরাभ, মান ब্রহৃত্তেত দেশিতে পাই, ক্বষ্ণবিবর্জ্জিত রাধ্র প্রাণহীন জড়, שবু তাছার একান্ত একাগ্র বাসনা তাহাকে তীব্র অনুভ্রুতি দিয়া তাহার

 সজ্জ্গেগবিষয়ক অধিকাংশ পদেই পদকক্ত্গৃণ দেখাইয়াছেন যে, একের দেহের কুক্কুম
 इইয়া পড়িয়াছে। যथন তাছারা তিন্ন রহিহ্যাছে, তথন রাধার তো কথাই নাই,

 বর্ণনার আতিশষ্য আছছ; ইছ এই তন্ময়তারই বৈশিষ্ট্য। फFহের প্রত্যেক অণু




 প্রত্যেক ভপ্পী|রা সে তাহার প্রিয়তমকক চঞ্চল করিয়াছছ। এই প্রেমে শ্রীর ও মনের মধ্যে কোন লুকোচুরি নাই। এই কারণে এই প্রেমকাব্যে শ্রু বে অপধিসীম





 বহুলতা नক্ষিত হয়। প্রেমের টন্মেষ, মিলন ও বিচ্ছেদ-এই সীगাবক্ পরিষ্রি


 इইয়াছিকেন। কিন্ত রীতি ও निর্দেশ কাব্যরচনার সহাষ্র হইতে পারূ, जাহ। কথনও কাব্যের প্রাণ হইতে পাতের না। গ্গেবিন্দাসেসর নিবিড়ত।, বিছাপতির


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(२)
$$

 প্পেনের তন্ময়তার বর্ণন। এই কাব্যের পরিধি সঙ্কীর, কিন্তু তাছার মধো ইছা রুস ভর্মপুর। ইছাতে বৈচিত্র্য আছে কিন্তু বিস্থৃতি নাই। যেখানে এই কাব্য ইছার্র

 আর অধিকাংশ সময়েই তাছার মান এক্টা ঢঙ মাত্র। ক্বষ্ণ তাছার সচ্ছে চর্লের


























 কবি বनिচ্ছেন :
( कड़ि ఆ কোমল)






 করিয়াছে একান্তভাবে তাহান্র নিজষ্ব পথে।






হাওsাম্ ছায়ায় আাল্লো় গানে
আসজ্র দ̆াएে
অপন মন্ন প্রহবো ডুবন
ভাব্বে মোছে।

মায়ার্ন চিত্র লেঋা, 一
বন্ত্ ঢের্যে সেই মায়া ঢো
সততत,
पুমি আমায় আপ্রিন্র’চ

 হইবার অฆ, बে ব্রেয়সী-
fि*



















> এ নীল অকাশ এত লাগিত কি ভালো,
> यদি না পডড়িত মடন তব মूখ্খ অালে। ?
> অপর্রপ মায়াবলল তব হাসি গান
> বিশ্বমাঝ্ে লভিয়াছে শত শত প্রাণ।
> তুমি এালে আগে আগগ দীপ ল’য়ে কত্রে,
> उব পাছ্ পাছ্ছ বিশ্ব পশিল অষ্টব্র। ( চৈতালি)

 পদাবगীক্ত্ত বনিয়াছেন :

मলয়ख পবন প্রশে পিক কুহব্রই শ্রুন উল্লসিত ব্রজনার্রী।
উनসিত পুলকিত সবঞ্ছ লञा তঞs
मদन ভেন অধিকাত্রী॥

আাবার,

> फूহ্রি উनমड ভাম।
> বিত্রহিণি জিবন নৈনরাশ।

# ब্রেসিডেন্টী কলেজ মাগ্গাজ্জিন 

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\begin{aligned}
& \text { दूविष कठ শ भ भाउसमिक }
\end{aligned}
$$

शत्रि दिल 斤िन श्रोिता ॥

















The desire of the moth for the star
Of the night for the morrow,




 অপ্নায্ কাসনার কथ निশিভেছেন।




















 ศ斤খিয্যাজ্

প্নথছলে Cưनिত যুবতী

কানন পণে কন্গ ল'য়ে চনলিত যखে নাগগ্রী
কুহ্মমশ্র সার্রিত্ত গোপন্ন,




## 90 <br> প্রেসিডেন্গী কলেজ ম্যাগাজিন

কিত্ত্ এই কাব্যে फেথি একটা बঢেনা, অজানা, সর্ব্বত্র পরিব্যাপ্ত ব্যাকুনণ; उক্কণীত্র হাদয্যের চঞ্পননত তাহারই অল্গমাত্র।

शাদম-বীণ|-यc্x মহাপুলকে,

মিলিয়া সবে হুনোক অার্র ভূনোক।
এই কবিতার একটে ছিক্ বিশেষভাবে অক্য করিরে ইইরে। কবি চরাচরবা|भী


 আাকারবিশিষ্ট পদার্থ্থের বেদনার মধ্য দিয়্য অ-ক্রপ বেদনাকে অপর্রপ র্রপ দিয়াছেন।
 ইহার মধ্যে কবি দগ্ধ দেবঅর্র প্রেরণণা দেখিতে পাইয়াছেন। প্রথম কবিতায় কবি অারষ্ভ




 ঢৈथিতে পারেন নাই। তিনি প্রেমকে প্রেনের অতীত কন্যাণের রাজ্যে নইয়া গিষ্木|ছেন। তিনি নাগ্রীর ছুই মৃর্ত্তে লেখিয়াছেন :

কোন্ ক্সণে
স্জজনন্র সমু্রু মন্থনে
屯ঠঠছিল দুই নারী
অতনেন্র শयাযতন ছাড়̣’।

একজন

निल्बে याয় প্রা৭न হত্রি,'
আান্র জন ফিব্রাইহা আান

निभ্ক বাमनाয়;

कित्वाइशः आवन Atcr
खीयन वृष्य
भबिब्ध मअभ णोर्र जोज्र











पুমি সমুশ্বে উদিলে হেসে;

मूब्ञে অবनত শিত্রে
खজি निर्भ্র বায় শীয় উষ্য়
निर्द्धन नरीजौज्र। ( हिত্র)










## 




भत्रिभूर्व उসুथানি-বিकচ কমन,
 ( কড়ি ও কোমল)


 সামগ্রী হিসাবে দেথেন নাই। অচ্ছোদসরুীনীরে মে রনণী ম্নান কর্রিতে নামিয়া|ছিন, মদন তাহার দেছৃক নিজের নীতাভুমি করিতে চাছিয়াছিনেন। কিঁ্ধ ধীরে ষীরে সেই রমণীর লাবণ্য যথন বিকশিত इইয়া উঠিন, তঋন

ভृমি পৰ্র
জানু পাত্যি বসি, নির্ব্বাক নিম্ম:্ ভর্রে

সমর্পিন পদ্দ্রান্তে পূজা-টপচান্র

বিবসনার বিবসন ক্রপ বর্ণনা করিয়া কবি বনিতেছেন :
অउनू ঢাকু’ क মু凶 বসন্ন্র কোকে তন্ন্র বিকাশ হেপ্রি লাজে শিত্র নত্ত।
 নাজহীন পব্বিত্রত-জুভ বিবসন্ন।
( কড়ি ৫ কোমল )
 বাश্টৌীন্দ্য সস্বৃক্ধে :

$$
\begin{aligned}
& \text { মর্সমেন্স কোমলতা ত্রন্স তর্সল }
\end{aligned}
$$

কিষ্ট তাহার পরই নিনি নিথিয়াছছন নারীর পবিত্রতার কথা, তাহার ু্র-
 কনক-অচন' বলিয়|, কার্ণ
‘কড়ি ও কোমল’ গ্রন্থে চুন্বন সম্বক্কে বে সনেট অছছ তাছাতে নরনারীর একান্তভাবে আপনার ও একান্তভাবে শারীর মিলননর্র কথাই কবি লিখিয়াজেন। কাব্যহিসাবে এই সনেট নিক্ধু নী ছইনেও খুব উচ্চশ্রেণীরও নরহ; কারণ ইহার মধ্যে কবিন্ন প্রতিজার বিশিষ্ট ধারাটট নাই। কবিন প্রাতভা বিকশিত ছইযাছছ

 নছে, बনকলম্বরে, বনের মর্ষ্যরে, তটিনীর তীরে ও নীরের 丁াছার স্পার্শ गাগিয়াছে;


 ঢ্রেথিতে পাই শxষ চুম্ধনের आ্লানিমা সমস্তু পৃথিবীতে পরিব্যাপ্ত হইয়াছে, এমন কি

 তাই তাহার নায্রিকl নায়ককে সব কিছু গান করিয়া, শুধু নজ্জাটুকু রাথিতে চাহিয়াছে:
বসন্ত-निनीषে বঁषু
नरं গन্ৰ, बহ মभू,
পোগাগে সुথ্থে পাে্ন उাকিত্রে।



[^36]
 নায্রিকা বলিয়্রাছে:







কেन জুमि মूर्डि হत্রে এলে, צरिহেন ধ্षানধাব্রণা木!


সে যथন অারও বেশী কাছে আসিয়| তর্ক করিম্রা প্রেম যাচাই করিতে আসিষ্রাছছ, তঋন নার্রী উত্তর লিষ্রাছ্ছ:

নিঢে তর্কーथাক্ তবে খक्!
কেন কাদি বুঝ্মিতে পাব্রনা?


 তাহার অক্ট্রেক হয্রত বুঝা যায়, কিন্তু 'সমন্ত কে বুঝেছে কথন ?









হইয়া, ऊাঁহার্য কাঢে মৃত্যু আপনা ইইতেই র্মনীয় নহহ। ‘ভানুসিংহঠাকুর্রের পদাবনী’ঢে রবীক্রনাথ বৈষ্ণব কবিদের অন্ুস্ণণ করিয়াছেন ভাবে ও অাযায়। কিন্জ ছুই-একি
 বলিझ্গাছে:

```
 घ木桃,
पू"অ’ মम थাম সমান।
মেব চ্বণ তুৰা, কেব জটাজুট
```


ছিত্র হিয়্যার্খবি অনুদিন অনুথন
অতুল ঢোহান্র লেহ।
जন্থত্র কবি বলিয়াছেন :

এনো বর্রccur),

বহ ভাनবেেে

मब्र्र পড়ি निয়़ে,


এ ঢো গোম মৃত্যুর কথ্।। কবিয় বিশ্ষী ৫ে, মৃত্যুর অন্তরানে যাইয়া প্রণায়িনী কथনও
 পাইয়া নতুন সৌন্দ্য্যে মগুত হ্য় আর প্রণয়ীীর জীবনে মৃত প্রণয়িনী অবিনশ্বর হ হইয়া



 বনিয়া আশ্বাস দিয়াছেন বে, বে ब্রণয়িনী এত আনन্দ দিয়াছিল, বিশ্ব্র্কতিকে বে এত মধুর করিয়া তুলিয়াছিন, তাহার মাধ্রুর্য লুপ্ত হইতে পারে না। মৃত্যুর অন্তরাঢে কোন बক অপরিচিত লোকক সে নিশজ্যই এই অক্ষয্য ভগণ্ডার নইইয়া অবস্সান করিতেছে।



## १५

 কবি বনিচেছেন :

> শ্বब্ত অা্ুু এ জীবনে মে ক্যাট্ট অনন্দিভ দিন-
> কম্পিত পুনক ভর্রে সभ্গীত্র ব্দেনা-বিলীন-

 পাইবেন।




















 স্রু্তু হইয়া যাইত।

> এই নদौ
> হাব্রাত তন্পঙ্ৰবেগ;
> এই बেข
‘প্ব্রবী’তে কয্রেকটি কবিত অছছ যাহা রচিত হইয়াতছ এই মৃত প্রিয়ার উদ্দেশ্যে। এই কবিঅক্য়ট্টি ভাবে ও ভাষয়্ অন্পপম। ইহাদের মধ্যে লেথি
 সমসু জীবনে পরিব্যাপ্ত হইয়্যা আাছ তাছা নাহ ; একদিন বিচশশ করিয়া তাছাদের মিলনন ইইবে, কবি বারংবার তাছার কথ্খ বনিয়াঢছন। অবশ্ঠ কবি এই কথ৷ মনে রাখিষ্যাছেন বে, মৃত্যুর বিচ্ছেদ্দ বে শূন্থত্য আছছ जাছা শূন্ঠ নয়, তাছার ব্যথাময় अগ্নিবাপ্পে গগন পুর্ণ হইয়্যা গিয়্যাছ্ছ। কিন্তু কবির কাছে এই পূর্ণতা ও শূন্ঠতাই শেষষ কথ্গ নহে। ইছা সত্য বে

কিস্টু ইছাই তো চরম নঢে, কবি ইহার পররই বলিতেছেন :

তাই ‘পূরবী’র לবশিষ্ট্য হইতততছ সেই সব কবিতাতে ভেখানে কবি পেই একান্ত ব্যক্তিগত, একান্ত নিবিড় নিনননর জब্ঠ প্রস্তুত হইতেছেন। একদিন এই প্রেণযিনী
 সেই অন্তুর্ছুত প্রিয়া তাঁারার পরাণ ছাইয়া আবার উপস্থিত হইবে। সেই অভিসারিকার

 সেই নীলাস্িনীী চলিম্র| গিয়াছে


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    नब जम्म नভি
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কবির ভরসা অঢছ বে, নীলাসপ্পিনী কাজ ভোনাবার জন্ঠ বারে বার্রে কাজের কশ্ষকোণে ফিরিিাtছে, সে তাঁাকক fিবিড়তম অভিসারে অাহান করিবেই করিবে,
```

 র্যাখি্যাচে।












অাজি অান্গ ব্থथ
চলিয়াছে আ্রাত্রিন্র আম্木ানে

পভাত্র্ন সিংছঘ্ধার পাতে।
उई
শ্মৃতিভাত্র আদি পঢড় আ|্ছ
ভাব্মুম্ত্ সে এখানে নাই।









ఆগে| ব্ধু
সেই ধাবমান কাল


# রবীর্দ্রনাথের প্পেমের কবিতা 

 ৭ই তুননামুলক বর্ণন্গ দিয়্রাছে:

उবু সেত্েে শ্বপ্ন নয়্র

সে আমান্র প্রেন।


প্রিবর্ত্তনন্র 儿্রোত্গ আমি মাই ভেসে
কানেत্র যা|্রায়।

এই নতুন সামঞ্জস্যের সন্ধান পাইয়াছছন বলিয়া কবি তাজমহনেব্র সম্পকক


 তো সঞ্চিত র্রছিয়াছে ‘চনে যাఆয়া’রূ র্।
 এখানে কবির প্রতিভার্দ অার একাট বিশিষ্ট স্ুরের কथা উল্লেथ করা হইবে।
 নমত। কবির কাব্যে বীররুসের অভাব অাছ এই অমুযোগ অনেকদিন ধর্রিয়া

 কুস্মুর্থথে মকর্র কেতু উড়াইয়া, কিন্তু ‘অহুয়া’য় <বি ঘथন তাঁহাকে পুনরুম্জীবিত কর্রিলেন, ঢখন তাহাকক তিনি ৫ই বনিয়া আবাহন করিলেন :

```
ভশ্ম-অপমান শষ্যা অাড়ে, প্পুপখ,
```



## 

যে যৌবনকক তিনি উদ্বেধিিত করির্নে, ঢস এই বনিয়া আক্কেপ কর্যিশ না:
 ভাঙনের মহারথে। যে বসন্তরক কবি আবাহন করিনেন, সেও আসিন যুদ্ধের ধানী

## 6. প্রেসিডডেন্গী কলেজ ম্যiগাজিন

 ‘भচনা', ইशার বানীচত নভুন তেজ:

भध्याप्ट दেन रु अध़ि



गार्थाब्र পथ?


बन्न नारि कत्रि णाइत्व
आव बत्र वq?









निजुरां पूर्शक्षत्र





ना मानित भर्डाज्य।

外-बिए बामाओ मय।

লহ্ছে এ প্রণম
जौरनख भूर्व भ|द्रिणां।

# জবীক্রনাপ্রে প্রেমেন কবিত 

এ প্রণতি 'পৰ্র<br><br><br><br>কর্বিয্মে আা্রান,<br>


অদ্ধশতাকীর অধিক কান ধব্রিয় রবীী্রনাথ কবিকার সাধনা করিয়াছছন। চাঁছার রচিত কবিতার সংথ্যা অগণিত ; তাহাদের ভাব, ভাষার ও বৈচিত্র্যের সীম|


 'সक্ধ্যাসপ্গীত' হইতে ‘মহুয্য’’ প্যাত্ত যত প্রেমকাবা তিনি রচনা করিয়াচছন তাছাদের্র সবগুনির ম্ধ্যে একট প্রধান স্থর অছে-তাহা হইঢেছে সামান্থের মধ্যে অসামান্থের পর্রিকল্পनা, মানসীর মধ্যে মানবীর আবিক্কার। ऊাঁার মানসসুন্ধরীকে তিনি



 বে তুচ্ছ ল্রেম তাহার মধ্যেও কবি অসামান্ঠতার গ্ৗীরব অনিয়াছ্ছন। সেই ধ্রেনে
 ফাক্লুনী ও স্ত্দ্রার প্রণয়কাহিনীতে। ‘সহস্রের মাঝে একজন’ তুচ্ছ নর প্রণয়়ের্র


ব্রেথেছে বেসন সুধাকর্গ
দেবতান্র গ্ডপ্তু শুধা যুগযুগাম্তর্র
জপনার্রে স্ধাপাত্র কর্রি, বিধাতান্র
পুণ্য অগ্নি ख্বালায়ে त্রেথেছছ অনিবান্ত
र्मবিত্রা যেসন সयতন্ন, কসনাত
চত্রণ কিব্রশে ষथা পব্রিয়াচছ হার্ত
স্থনিস্পল গগন্ন্র অनষ্ত লनাট। ( চিত্রা)

## রবীক্র-পর্রিষম

































ডমলচБ্দ্র গুপ্ত সম্পাদক

## বেন্গলী লিটারারী সোসাইটী















প্রভাতকুমার রায়
সশ্পけছক

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# সাহিত্য প্রসন্গ 

## সমাGল্গাচনা *

অধ্যাপক এ্রীশশাঙ্কনশখর বাগচী, এম্-এ



 ধরাইয়া দেয়।





 কাব্যथানা কেন ভাল ?—তবে কবি এ কাব্যায়ানী অনেকেই ছম্রত সন্তোষজনক উত্তর দিতে পারিরেন না। স্থষ্টি, সদ্ডোগ 3 বিক্লেষণ বিভিন্ন জিনিষ। কিক্তু স্থৃ্টি করিবার
 শ্রষ্ঠরর বে সানর্ধ্য উহ সকক্রিয়, সচন, বেগবান-আনক্কের আতিশযা আপনার আবেকৌ








কবি ও কাব্যার্মানী উভয়েই অন্প-বিস্তর সगালোচক। ক্বি যখ্খন একটি শক্সের্ন


[^37]











 কর্রিহ।।















 চनिश्श आসিতেছে।

## সাशिত্য ब्रम可

 কর্রিতে চাই, সাহিত্যের বিশেষ একটট র্রপ লইয়া অলোচন্গ কর্রিতে চাই, ইহার জন্ঠ র़সতত্ত বিচারের প্রয়োজন কি? কবিতা, নাটক, উপন্ঠাস প্রত্তি সাহিত্যের बে



 দার্শনিিক তর্কের অবতার্গী করে।

 সমা্লাচনা করিয়া চनि, তবে সমানোচনা नিতান্তই ব্যক্তিগত খ্যো়ালের জিনিষ হইয়া


 ও বৈশিষ্ট্য নক্ষ্য করি, অহাই আদর্শ ধরিয়া যদি মধুশ্রদনকে বিচার করিরে যাই, তবে



 করিতে গিয্রা এই সাধারণ সিদ্ধান্তগুলি প্রয়োপ করি। নিজের ব্যক্তিগত রুচি অমুসারে

 কর্রেন না, নিজের সামর্থ্থ্য নূতন রুচচি, নূতন রীতি, অভিনব आদশ্শ স্থষ্টি করিয়া চলেন।




 সেক্সপিয়্ররের নাটকের পার্থক্য যথ্থে-্ট-প্রাচীন সংস্কৃত নাটকের সহিত রবীক্রনাথের
 সবগুনিই নাটক এবং উচ্চণ্রেণীর নাটক।

## প্রেসিড়েন্গী কলেজ ग্যাগাজিন


























 উৎপাদন কর্রিতেছে। সুতরাং এথন এই আঢোচনার্র কোনও প্রয্রোজন নাই; বষ্যান


 সক্গাन 斤िय।

## মাক্স'-অর্থনীতি

## 

## বাড়তি মून्ड्ड (Surplus Value):







 ব্যবহার আরন্ত ছ’ল—তथনই শ্রযু-ক্ষ্তায় শারীরিক মালিক (Physical owner)










 দ্বিতীয়ত: শ্রমিকের ছাত থেকে बে পণ্য উৎপন্ম হয় তাতে শ্রশিকের কোন দাবীই থॉক না। তার সবটুকুর ওপরেই মালিকের এক্ছছত্রাধিকার থাকে। কেন্नন।,

[^38]

 নেবার డেষ্ঠী্য থাকে।


































 श্যাया মূল্যের সচ্গে এর উৎপাদন্নে তারত্যা হচ্ছে শুধু মাত্র সমত্যের মাত্রায়। শ্রমিক
 বাইরে, শ্রামিক ৮, ৯, ১০, ১২ ঘন্টা খাটে বলোই সালিক রীতিমতভাবে বাড়াতি সূল্য লাভ ক’র্রে আসছেন।

স্থির 8 পর্রিবর্ত্তনীয় মূল্ধन (Constant and variable Capital)-
 বাড়তি মूল্নোর উস্তব, এ কथा বোঝা খুবই সহজ। মूস্কিল रচ্চু বাড়তি মূন্যের পরিসাণ ও অহুপাত (Proportion) 他 করা নিত্যে। সাধারণভাবে, প্রত্যেক

 ককবন থেটেই যাওয়া অর্থাৎ অতি সাধারণ ख্রম। कि র্বকম অবে বে শ্রমিক


 সসজ্ঠ এক্টা বিশশষ কাজের ক্সেত্রেই প্রবোজ্য। প্রত্যেক ख্রমিকই এই ছই রকন


























 Capital)।
















 ไড়িরেছে।

 উৎপত্তি। বাড়তি সুল্যের সক্গে সক্গে ব্যবসায়ীর মূলধনসাতত্রেই রৃঙ্ধি ঘটায় এ ব্যাপারী













জরুরী এবং বাড়িত খাটুনী কাল (Necessary \& Surplus labour

 জন্ঠ বাড়তি মূন্য উৎপ্ম করর। বর্ত্তমান সসাজ্গ, শ্রম-বিভগগ প্রচলিত থাকায় শ্রমিক
 যে শ্রশিক বে বিশেষ বিভাগে কাজ করে, সেই বিছাগে সে এমন পরিমাণ জিনিষ বানায়, যার ধাজার ছাম তার্র নিজ্জের সাহিনার্ সমন। বে াঁাতি, সে নিজ্জের মাহিনার উপযুক্ত














 পরিণত ক্বতে পারি।















একই সঙ্গে কাখ্যাকারী সকল শমিটকর সং্য্যা এবং তাদের बততারকর Cশাষণেের মাত্রার* গুণ ফল দ্বার্রা।








































 বवেन ‘অপোক্ষিক বাफ़তি মূন্’’ (Relative Surplus Value)।


 तनथाढ भारि। षর্木,












## মার্স্স•অর্থনীজি

 সगয়ও তেমনি ক থ'-তে কলে এ্রা
















 বাড়তি খাটুনীর মাত বাড়ান সম্ভর নয়। কিন্তু ৎকदনমাত্র শীবার, গরবার ঙ্গ্র


 ¢म际1








## প্রেসিডেন্গী কনनজ ম্যাগাজিন

















 হ্হ:ত পাররন ।













 थानेनौ कान।






 তাদ্রর কর্ম্য-ক্মুার তারতনোর ওপর অনেকটা নির্ভর কার। কিক্তু তারাই যখন
 গড়মিনে একটা সাধারণ এাট হিচসবে প্ররিণত হয়। তখন, आামাঢদর হিসেব মত


 গড় লাভ ছাড়াও, বহুশ্রমিকের একত্র কাজ করার অন্যান্ম অন্নক স্থবিধা আাছছ।







 শিদচ্ঠার গোড়াপত্তন করেন।

आধুनिক শিৰল্পের উদ্ভব (Origin of Manufacture) —বর্ত্তমান
 ঢার উদुব ছয় ছুরকনম। खচের বিজাপ অমুসাবেইই উদुবের অবশ্য তারত্য














 इওজাই হ’্ন মাঁিিকরদর লক্য।













 দিয়ে রাড়তি নাভের্ন হার কত কম নিজেচের অন্ম রাঢvন।
 অছায় হয়। পৃর্ব্রতন যে সমস্ত সমাজের ভেতর দিয়ে বর্ত্তমান মুলধनী সমাজ জন্মেজ,


 সমাজজ প্রবেশ কর্নলে। বাড়iতি লাভভর ওপ্র, কোন বিশেষ সামাজিক ছাপ নেই।
 বাড়তি খটাননার ড্তের দিত্যে শোষণ প্রথথা চলে আসছিল। যতদিন মানুম কেবলমাত্র
 সজ্যতার কোন উন্মেষই হর্যানি। তারা পশ্তু মতই জীবন নির্বাহ করাতে। ক্রর্মে


 মানব সভাতার জন্মে বে সৃহায়ক হয়েছিল, সে কথ অস্ধীকার করববার্ উপায় নেই।


 থেকে উচ্চजর ধাপে উঠ্,ত থাকক। সেই অলিম যুগ্গেই বাড়তি শ্রদের অগ্তিত্ব থাকায় সিশররর বিশাল পিরামিড, প্রভূতি গািত হবার স্থয়াগ হত্রেছিন। তবে সে বাড়তি यাদ্রীর সচ্পে বর্ত্তমানের বাড়তি খটুনীর পার্থক্য হ্চে্ছ এই শে, সে বাড়তি খাটুনীর ফন
 নিজ্জের বাড়তি ঋাটুনী উপছার্র দিত। আর্ বর্ত্তমান্নর বাড়তি খাটুনীর ফল্ন যায়

 নাডের প্রত্যেকীী কণা হ্্ছে শ্রমিকের অক্লন্ত পরিশ্রমের ফল ।

## রবীন্দ্রন্!木্থের কাব্যে স্বঢেশ












 পরিহার করে, রবীক্দ্রনাथও পর্রিহার করিমাম্ছন।















जাচছ। এই শ্রেণীর কবিত্ শ্রেষ্ঠ কাবা হইয়াছে তখনই যখন কবির উদার্ কপ্পনা






$$
\begin{aligned}
& \text { অজজম্ সহহ্র্রবিষ চব্রিতার্থতায় ; }
\end{aligned}
$$




 জীবন্নর বর্ণধবচিব্য আছে আবার অপজ্রপের রেথাপাতও হইয়াছে।




 জাত্বিকে কবি জাগ্রত করিতে চেষ্ঠা করিয়াছছন। তিনি দেথিম্ছছেন এই জすি্র
 অভয়েরে মন্ত্র। তিনি এই পিছিয়ে-পড়| জাতিকে বনিয়াছ্ন্ন :

## আগ小 চন্, আগে চন্, ভাই

বিপুল এ ধ মহাবেগবান্ মানব হৃার্, चার্র বসে" অছছ, তা’রা বড় নয়, ছাড় ছড় মিচে ছল ভাই।

 নির্বীব্য ভারতত প্চাতে পড়িয়া রহিয়াঢছ। ডাই জাতীয্র মহাসত্ম্মননের জন্য তিনি বে মহাসঙ্গীত রচনা কর্রিতেন, তাহার মধ্যেও ব্যথার্ন স্রুর রহিয়া গেন:

দেশ দেশ নািিত কর্রি মক্సিত তব ভের্রী,
आসিল যত বীব্রবৃন্দ আসন তষ यেব্রি।
দিন আগす ঐ
ভাশ্রত তবু কই?
সে কি জহিিল লুপु সব জন পশচাতে?
লউক বিষকর্ম্মভার্র, মিলি সবাঞ সাথে। ( গীত-পঞ্পাশিক।)
শ্বাধীনতারক মান্হষের জন্মগত অধিকার বনিয়া কবি মনে করিয়াদছন এাং


 অভয্সমন্ত্রে দীক্ষিত করিতে চাহিয়াছেন :

পুু্জিত অবসাদ-ভাস্দ হান্ন অশনি পাত্ড।
ছায়াভয় চকিত-মাছ় কব্সহ পর্ৈিত্রাণ হে,
জাগ্রত অগবান্ (হে। ( गীত-भষ্পশিক।)

 জাতিকে বনিত্তেন্ছ :

ఆत্রে ভীক, ওत্র মুছ্, তোলো তোলো ศिির
আমি অছি, তুসি অছ, সতা আছে স্থির।



``` वनिशंशिक्विन:
मत্রিতে চাহিনা आমি সুক্সৰ্ব ভুবনন
মান্বে্প মাঝ্小ে অসি বাঁচিবার্রে চাই।
```




``` সর়ণ-জয়ী বীt্ব্যের আরাধন করিয়াছেন। তিनि ডারতকক आাবাছন করিয়া বনিয়াছ্ন :
```



```
দাও গো জীবন নय।
```


## 

नৃও সে মন্ত্র তন। ( জাতীয় সঙ্久ौত)
 বनिয়াছ্নন :
 ইহাদের উৎকর্ষ হইয়াঢছ সেইখানেই, বেখ্খেন মৃত্যু অপনাতে আপনি পরিসगাপ্ত इয় নাই; পরন্ত অমৃত ন্নাকের সন্ধান অনিয়াছছ। রবীক্রুনাথের কাব্যের প্রেধান গ্ডণ जাহার অপরিসীম বিশ্ছৃতি। শিখ জাতির ইতিহাসে মৃত্যুবরণেরে অসংখ্য অ্বনন্ত


 মরুণ কিছ্রই নাই। তাই গুরু গোtবিন্দ বলিয়াচছন :


```
    \ন\ে\\\
```





```
    निषै जनন্ठ ज्ञा\कि
 তাই তাঁহার কাব্যে আকাশের বিস্তীর, অতনম্পশ্ণী গভীরতা আসিয়াছে। बিি ‘স্মুভাত’কে আবাছন করিত্টেছন :
\[
\begin{aligned}
& \text { ভब্ম নাই, धत्रে ভয় नাই। } \\
& \text { निঃঃেশে প্রাণ ষে কব্রিফে দান } \\
& \text { শ্শ্যম নাই, অ’犭 শ্শ্য নাই। }
\end{aligned}
\]
\[
\begin{aligned}
& \text { (ক্মেনে গাহিব বfি’ मাও ম্বাयो, }
\end{aligned}
\]
\[
\begin{aligned}
& \text { शून्रম-पयक्र বাজাব। }
\end{aligned}
\]
\[
\begin{aligned}
& \text { তোমা্র অর্যা সাজান। (প্রীী) }
\end{aligned}
\]





 কাব্য রচনা কর্রিয়াছেন এবং সহরের যান্তিক সভ্যতায্য cাশোর বে প্রশান্ত স্বালাবিক



 তাহাব্র অপঘাত মৃত্যু ইইবেই। ভারতবর্ষের ভবিষ্যেৎ তাছার অত্ীীতের ধাজাকেই অক্ুু রাধিবে।







\[
\begin{aligned}
& \text { অছ জাগি’ }
\end{aligned}
\]

> কেই বিষাすান্য
> শ্রেণ্ত 斤ান অপনাত্র পূণ অধিকাत্র—
অच্ড বিষ্ধCन।（পূנবী）





 आপনাদদর প্রাণের আববগ প্রকাশ করিতে ব্যস্ত，জয়ন্তী－টৎসবে ইছারাও বোগ斤িয়াঢছন। মানবাত্মার অদম্য প্রকশশনানসা কবিকে মুগ্木 করিয়াচছ；তাই তিনি
 গান ও উন্মুখর Cফায়ারার ভ্রোতেন্ন সা্গে।

 রীীক্রনাথ বোধ হ






































 এমন Cকানও ঐতিহাসিক ঘটনাই কবি তাছার কাব্যের বিষয়ীত্ত্ করেন নাই, বেষানে ঐিিক স্गাভ ষর্স্মের কাচছ পরিিত্যক্ত হত্য নাই। এমন কি পতিতা পর্যান্ত তাহার ব্যবসায় ভুনিষ্যা নারীর মহিমায় অন্থ্রাণিত হইইয়াছে। 'পতিত’' কবিতায় শেষের









 একীকর্রণ নছছ, ত্রিশরণ মন্ত্রের একীকরণ। কবি বনিতেছছন :

ल মন্ত্র ভাবকী
দিন অর্থ্তিত গকি
কত শত শ丁াকীत्र সংসাম ঘাত্রাদ্র-

এক \&্রিব কেন্র মাt্থ
Бद्यम মूক্তিম সাধनাত্天 ;-











 বিশ্বপ্রিযার কथl, কারণ यদিও কবি তাছাকে জানৈন নi, তবুও তিনি ইছ। ব্রিয়াছেন যে,










\[
\begin{aligned}
& \text { তুল্ম মা মাষ্তে শক্তি }
\end{aligned}
\]

> cোমাব্রই র্রতিমা গ|ড়ি
> সन्निज्र মन्मिज़।





 কর্রিয়াছেন।
 "जनগণমন অধিনায়ক জয়্হহ ভারততভাগ্যবিধাত"" আর "રে মোর চিত্ত পুণ্য তীর্থ্। এই ছইটি কবিতায়ও কবির প্রতিভার অপ্র্ণচারই পর্রিচয় ঢেয়। "পগ্জাব সিল্ু





উারতর্ব্ষকে মহামানবের তীর কল্পনা করির্যা কবি যে কাব্য রুচনা করিয়াছেন তাছার্র


> (হখখী
> শক হুনদন পঠান দৌগন

 বলিতেত্ছে, ইহার র্রপ কি রককম, ইছাকে, কবি ভারত্বর্ব্রের ইতিছাসে কোধায়, कি আকারে দৌিয়াছছন ? ইহা य斤ি স্বপ্ন না ইইও্গা थাকে, ইহা य ি সতাই ভারতবর্ষের


 (Carducci) Ode to the Fountain of Clitumnus কবিতার কথ্|






 ডাহ বিশেষভাবে ইতানীয় প্ত, Janus 3 Camesene-木 আমল इইতে আরাল্ত


 অনুভ্ভির কাছছ রবীক্দনাথথথর পরিকল্পনা বাচ্পের মত প্রাণইীন।*

\footnotetext{






}


 ভাব্রতবর্ষের প্রীচীন সাহিত্যে। এই ভার্রতবর্ষ কুমারসন্তব 3 小েঘদূতের অারতবর্ষ।




 <কান ককান কবি প্রীীন কাব্যের উদ্দেশে কবিতা রচনা কর্রিয়াছেন; কিত্তু সেই


 এ শিল্পকনায় প্রাচীন बীসের বে মূর্ত্তি পাওয়া যায় ডাছার চিত্র কবি কীট়স্ আাঁিতে






 এবং সেथানকার জীবনষাত্রার প্রধান গুণ এই যে তাহা মন্হরতায় ভরা, তথায্য কোন




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( কब्रना)





जीऽ ममाभृन














 ※ কবিতার সমশ্রেণীড্রক্ত।





অयइ শिथिল वেশ;























\section*{}



 করিয়াছিন।

















যেমন আকাহশর এক তার৷ আর এক তারার স্িত সম্পুর্ণ স্বতন্ত্র
 কাব্যলোcক প্রত্যেক স্বতন্ত্র কবিতার মধ্য fিয় একটী অর্রপ ঐণক্যর গাঁথন চলিয় বিশ্বসাহিত্যের স্থপ্টি। ককান একজন কবিকে সত্য করিয়| জানার ভিত্র দিয়া সকল কবিকেই জানার পথ প্রেশ্তু হয়। অামার

 ইহাতে আমি নিজেকে ধন্ঠ বোধ করিরিত্ছি। ইহার দ্বারা য়ি এই প্রমাণ হয় যে আমার রচন সন্কীর্তভাবে কেবল आমার স্ব<দশ সীমার মধ্যেই অবরুদ্ক নহে তবে তাহা আমার পক্ষে গ্যেরববের বিষয় ছইবে। ধংসরে বৎসরে
 থাক এই আমার কামনা।

\section*{ख্রীরবীক্রননাथ ঠাকুর}



जबनाइल्य ज्ञ


\section*{সभुण उर्ष}









 পড়ে ।

 ऊनান।










 - रुग


 आनानिए।

बाविभग वारिज़ै
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Printed and published by K. C. Banerjee, at the Modern Ay Pregty 1/2, Darga nitun Lane, Calcutta, Edited by Nikhilnath Chakravartty, Presidencol Colkege```


[^0]:    " And all that tint and melody and breath, Which in their lovely unison are thou,

[^1]:    *' Dreaming Muse '-By Stephen Phillips in 'Primavera' and 'New Poems.'

[^2]:    *Commentary on Kamasutra.

[^3]:    *The presidential address delivered at the 28th Anuual General Meeting of the Geological Institute, Presidency College, on the Igth August, 1933.

[^4]:    *Our correspondent, is a student of this College, but he does not want that his name should be published.-Ed. "P.C. M."

[^5]:    *Cassel-The Crisis in the World's Monetary System.

[^6]:    *Translated from Mrs. Kamini Roy's poem entitled "Ma Amar" from her poetical works, "ALO-O-CHHAYA."

[^7]:    *Translated by the writer from his own story in Bengali, now included in his book "Chhinna Papri" (Broken Petals), published by Messrs. Gurudas Chaterjea \& Sons, Calcutta.

[^8]:    I. Vak. I. I.

[^9]:    r. Suksmaryenapravibhaktatattvamekavamekavacamabhispandamanam Utanye viduranyamiva ca putam nana rupatmani sannivistam.
    2. Tadevam varatikanvesanaya pravrttas cintamanim labdhavanitisabdavicaraya pravrttah prasangad advaite aupanisadi brahmanyapi vyut-padyatam-.-Sabdakaustubha, p. 12.
    3. Pan. VI. i. 123.
    4. Sphotah ayanam parayanam yasya sah sphotayanah sphotapratipadanaparah vaiyakaranacaryah-Kasikavrtti, p.

[^10]:    1. Kim punar nityas sabda ahosvit karyah-Mahabhasya, Ip. 54.
    2. Evam tarhi sphotas sabdo dhvanis sabdagunah. Katham? Bheryaghatavat-Sphotas tavaneva dhvanikrta vrddhih-Ibid.
    3. Srotropalabdhir buddhinirgrahyah prayogenabhijvalita akasadesas sabdah-Ibid., p. 87.
    4. Arthavasayaprasavanimittam sabda isyate-Sphotasiddhi, sl. I.
[^11]:    I. Vaiyakarana varnavyatiriktasya padasya vakyasya va vacakatv-micchanti-Pradipa, p. 16.
    2. Nirastabhedam padatattvamekam-Sphotasiddhi, sl. 36.
    3. Vatrapi kevalam padam prayuyuksitam, tatrapyavasyamastitistatidevadattadipadam buddhau viparivartate-Tatha na hyasadhana kriyasti, kevalakarmaprayoge kimapi sadhanam dravyam guno vavagamyateSankara on Yogasutrabhasya.
    4. Vakyasphoto'tiniskarse tisthatiti matasthitih-Vaiyakaranabhusana, sl. 6I.

[^12]:    *The article was read at a debate of the Presidency College Historical Seminar. The writer has obviously showed only one side of the picture, that is, the Catholic point of view which is often overlooked.

[^13]:    *Science Progress, October, 1933.

[^14]:    *The Nature of the Physical World.

[^15]:    I. Where is Science Going-By Max Plancls.

[^16]:    I. The Universe in the Light of Modern Physics-By Max Planck.
    2. Where is Science Going.

[^17]:    *Read at the Fifth Ordinary General Meeting of the Geological Institute, Presidency College, Calcutta, held on the inth March, ro33, under the presidency of Prof. W. D. West, m.A. (Cantab.). One of the Geological Institute Medals for the session 1932-33 has been awarded to the writer of this paper.

[^18]:    *Speaking of " The plan to unite the whole of Slavdom under the wings of Russia," Dostoievski, the great Russian novelist, remarks: "And this union, not for the appropriation of other's property, not for violence or for the annibilation of the various Slav individualities by the Russian Colossus, but in order to renew them and to bring them into their due relation to Europe and to humanity-to give them at last the possibility of peaceful life and of recovery after countless centuries of suffering, and when they feel their new strength of adding their bundle to the granary of the human spirit and saying their word in civilisation! . . . . . Do not all Russians desire the liberation and exaltation of the Slavs on this very basis, for their full personal freedom and for the resurrection of their souls, and not to win them politically for Russia and through them to strengthen Russia politically, as Europe suspects?" The ruling class in Russia, however, surely wanted to " win them politically for Russia and through them to strengthen Russia politically " as Europe knavely suspected.

[^19]:    *The string of imposing titles used by the Czars is in some respects a reffection of the polyglot empire over which they ruled: "Emperor and Autocrat of all the Russias . . . . ., Tsar of Kazan, of Astrakhan, of Poland, of Siberia, of Kherson-Taurida, of Grusi; Gosudar of Pskov; Grand Duke of Smdensk, of Lithuania, of Volynia, of Podolia, of Finland; Prince

[^20]:    of Esthonia, of Livonia, of Kurland, of Semigalia, of the Samoyeds, of Bielostok, of Korelia, of Foer, of Ingor, of Perm, of Viatka, of Bulgaria, and of other countries; Master and Grand Duke of Lower countries in Novgorod, of Tehernigov, of Riazan, of Polotsk, of Rostov, of Yaroslav, of Vieloselsk, of Udork, of Obodsk, of Kondsik, of Vitelsk, of Mstilav, and of all the countries of the North; Master Absolute of Iversky, of Kastalnisk, of Kabardinsk, and of Armenia; Sovereign of all the Mountain Princes of Tcherkask; Master of Turkestan; Heir Presumptive of Norway; Duke of Schleswig-Holstein, of Stormarne, of Dithmarschen, and of Oldenburg." (Henry Norman's 'All the Russias'). ". . . . probably no such claim has ever been put forth elsewhere," Mr. Norman observes, ". . . . certainly no such claim has ever been so widely and so sincerely allowed."

[^21]:    *Sir Alfred Ewing's Presidential Address at the British Association, 1933.

[^22]:    *Nineteenth Century, February, 1934.

[^23]:    *Prof. M. N. Saha's Presidential Address to the Indian Science Congress, 1934.

[^24]:    *Read at the Anastika, Eden Hindu Hostel.

[^25]:    *Political and Social Doctrine of Fascism-Benito Mussolini-Enciclopedia Italiana.

[^26]:    I. Avayavinyunaparimanatvadavayavanam paramamahatanca varnanam tadanupapatteh-Tattvabindu, p. 2.
    2. Vide Siddhantamuktavali, Kar. 44.

[^27]:    1. Vak 1.85 .

    Also-Tadeva hi sarvajaninamanasapratyaksapravedaniyaprayatnabhedabhinnananadhvanipratyekavyanjaniyam tattvam-T. B., p. 3 .
    2. Uha-Prakratau amnatasya mantrasya vikrtau samavetarthaya taducitapadantarapraksepena patha uhah:-Rigvedabhasyopakramanika, p. 2 I .

    Patanjali has mentioned the sixfold importance of the study of the Science of Grammar. He says that in the Vedic mantras no word is found to have been used in all genders and all case-endings to suit various practical purposes. It is, therefore, that a man who has got to perform various sacrifices, is required to make necessary changes in the wording according to circumstances. This change of wording is called Uha; and it is for this purpose that a knowledge of the principles of grammar is necessary. Kaiyata explains the point by saying that in a sacrifice in honour of the Sun-god, the term agnaye in the expression "Agnaye tva justam nirvapami," should be substituted by suryaya.

    Tantra-When a subordniate sacrificial act (angayaga) is prescribed only once in connexion with a number of principal sacrifices, we have a

[^28]:    case of Tantra: Ubhayoddesena sakrdanusthanam tantram-Jaiminiyanyayamala, p. 666.

    Prasanga-When a particular thing which is prescribed in comexion with another, we have a case of Prasanga: Anyoddesena anyadiyasyapi sahanusthanam prasangah-Ibid.
    I. Yatah sphotapakse hi niravayam vakyam niravayavasya vakyarthasya vacakm, avayavastu padatmaka varnatmakas ca mrsabhuta itisyate Tatasca padatadavayavasritasyohader mahavakyavayavantaravakyarthaprayajadyasritasya prasangatantrades ca uttaratra vicaryamanasya mrsatvam syat. Atas tatsatyatasiddhyartham sphotanirakaranamiti na nisphalam-Prabha on Sabarabhasya, p. 49.
    2. The sacrifice in which the details of the ceremony are described and according to which other sacrifices are performed is called the principal sacrifice while the latter are called the derivative sacrifices-Pradipa; p. ${ }^{20}$.

[^29]:    I. Satyapi va tathavidhe samastye nastyevarthapratitih-N. M., p. 368 .

[^30]:    1. Purvapurvavarnajanitasamskarasahito' ntyavarnath pratyayakah-. Ibid.

    Purvavarnajanitasamskarasahito' ntye varno vacakah-ityadosahSphotasiddhi, p. 44.

    Atha va vasanaivastu samskara, sarva eva hi.
    Drdhajnaanagrhitarthe samskaro' stiti manyate-S. V. 99.
    2. Yo hi yadgocaranubhavayonis samskaras sa tatraiva dhiyamadhatte iti tasya svabhavah. Yadyanyasminnapyadadhati kimcideva ekamanubhuya sarvas sarvamartham vijaniyat. Api ca samskara iti ca vasaneti ca bhavaneti ca pracinanubhavajanitamatmanas samarthyabhedameva smritijnanaprasavahetumacaksate; no casyaivarthapratyayaprasavasatktis sakya kalpayitum-T. B., p. 6.
    3. Esa pracina-jnanasya saktih; atmani ca tisthati. Athava atmanas saktih purvavijnanena janyate.-Gopalika under Kar. 7. Sphotasiddhi.
    4. Saktes saktyantarayogas tatra satyapyadarsanam.

    Vilaksanasyopajano navisesacca karanat.-Sphotasiddhi, sl. 7.

[^31]:    

[^32]:    Printed by K. C. Banerjee, at the Modern Art Press, i/2, Durga Pituri Lane, Calcutta. Edited and published by Nikhilnath Chakravarty, Presidency College Magazine, Calcutta.

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     प্যকান্ন।"

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     বদनইই গণা হবে।

