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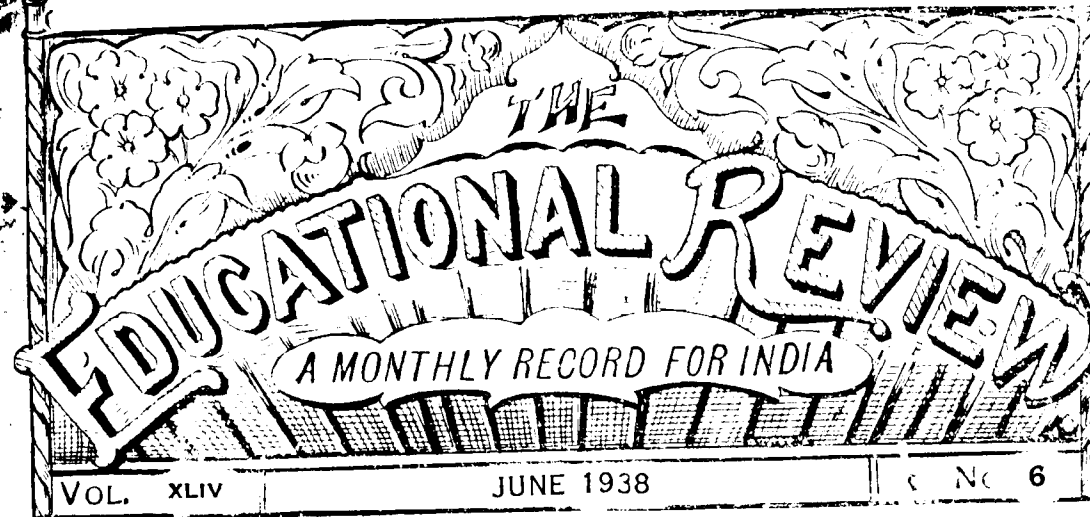
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A MONTHLY RECORD FOR INDIA

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TO THE MEMORY OF PRINCESS MARIA TENISHEVA.*

By H. E. PROF. NICHOLAS DE ROERICH,
Naggar.

THROUGHOUT the history of mankind periods of destruction and denial have always been succeeded by those of construction. In these latter the "constructors" of all ages and nations have found themselves on the same side.

Men destroyed, squandered, with nothing to substitute for what they laid waste. But it is said: "Do not destroy the temple unless you can erect a new one in its place."

The names of the squanderers and of the destroyers have either been swallowed in the darkness of oblivion or have become dreadful phantoms terrifying new generations.

But in times of reconstruction the names of those, who took up the task of building anew, mindful of the future, will be linked together in one endless chain. And humanity will always look back at them with a sigh of

* (Ten years have passed since the death of Princess Maria Tenisheva, who was one of the remarkable art collectors of Russia. She founded many schools and museums and sponsored folklore research. Princess Tenisheva loved Russia deeply and India and it will be interesting to our readers to acquaint themselves with the achievement, presented by the masterly pen of Nicholas Roerich, the great artist and philosopher, who for many years closely collaborated with Princess Tenisheva.—Editor, "E. R.")

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refuge in the hope for evolution. Varied are their names, far divided are they by countless centuries, diverse are the fields on which they wielded their invincible weapons for the progress of humanity; yet, in spite of all these differences, they possess the same qualities.

Indefatigability, fearlessness, thirst for knowledge, tolerance and a capacity for enlightened labour—such are the qualities of the seekers for truth. There is still another quality which unites more closely these varied phenomena—that difficulty of attainment, inherent in all progressive movements, falls to the lot of these toilers whose aim is to bring spiritual light to the universe.

It is a custom to speak lightly of the "martyrs of science, the martyrs of creative work, the martyrs of constructive work, the martyrs of the seeking spirit." These words are uttered as calmly as a discussion of one's daily diet or conventional habits, as though this martyrdom had become indispensable and immutable. The adherents of coarseness and vulgarity warn their children: "Why should you become martyrs, when due to our efforts, we can offer you an

easy life, and an appetite unspoiled by burdensome thoughts. See how hard it is for the seekers for truth: only a very few of them walk unwounded along the precipice of life. You are our children and therefore you must assume the same undisturbed position in the cemetery which we have earned by our desire for tranquillity."

Yet, beyond all question, it is this very tranquillity which comprises the most terrible death, because that which lives never demands tranquillity, but on the contrary lives in an eternal pulsation of perfectiveness.

Maria Klavdievna Tenisheva—a "constructor" and a collector—has left us.

Her life could have been calm and untroubled. Conforming to the established standards, she could have safely invested her capital in various countries and found herself, in the end, among those who take no part in the violent commotions of humanity and live peacefully until a natural death overcomes them.

But a longing for knowledge and for beauty, an irresistible urge to create and to build, kept Maria Tenisheva away from the still waters. She never experienced the deadly tranquillity. She yearned to know, to create, to go forward.

Perhaps those who only met Maria Tenisheva amidst the conventional smiles of social life would disagree with me. For the spirit of seeking was so tense and so deeply rooted within her that its essence came to the surface only on rare occasions. To know that side of her character one had to meet her at work and even then in the bright moments of creative work. Then Maria Tenisheva would irresistibly blaze forth with the sacred fire of creating, building, collecting and preserving the treasures by which the spirit of man endures.

Indeed, she strove whole-heartedly and untiringly to safeguard the valuable shoots of art and knowledge. Every collector knows how zealously one should protect all constructive effort against the vicelike grasp of those who aim to destroy it.

Let us sum up all that Maria Tenisheva has accomplished.

To the city of Smolensk she gave a splendid museum, many canvases which would arouse the envy of any metropolitan museum.

To the Russian Museum she donated a marvellous collection of water colours where, side by side with the Russian painters, were represented some of the best foreign masters. But the Museum Administration of that time did not comprehend the wide reach of such a gesture and refused to accept the foreign masterpieces. It appears as though we were unable to think beyond dead moulds.

Let us remember another case of rank injustice. The diocese of Smolensk—with the benediction of its bishop—had placed and sold at auction sacred utensils from the Smolensk Cathedral Sacristy. Maria Tenisheva, wishing to preserve these valuable artistic pieces for the city of Smolensk, commissioned the curator of her museum, Mr. Borstchevsky, to purchase them at the auction which benefited the city of Smolensk. Maria Tenisheva was attacked in the papers by a certain General V. for "pillaging the Smolensk Sacristy." The affair went to court and the slanderer was put to shame. But this goes to show the state of affairs in Russia of that time and the manner of attacks that the collector had to suffer in the interests of the people.

Many museums are indebted to Maria Tenisheva.

The Museum of the Society for the Encouragement of Fine Arts, the Museum of

the Stieglitz School Society, the Museum of the Moscow Archaeological Institute and many others contain donations from Maria Tenisheva.

Many schools were founded by her and others supported by her. And finally there was the art nucleus at Talashkino where Maria Tenisheva tried to assemble the best men of art for the revival of artistic principles.

Let us remember the artistic workshops organized in Talashkino. Let us remember the inspiring plays. Let us remember the art students who were sent abroad to study—to that same studio where later Maria Tenisheva herself found refuge. Let us remember all the measures taken by Maria Tenisheva to increase the production of artistic handicraft and embroidery among the peasants of the Smolensk province. Let us remember "Rodnik"—the artcraft store in Moscow. Let us remember the exceptional care with which Maria Tenisheva surrounded painters. Let us remember the fairy-like "teremki"* of Malutin. Let us remember the excavations in the Kremlin of Novgorod made possible through the support of Maria Tenisheva. Let us remember the archaeologists, Prachov, Borstchevsky, Ouspensky..... Let us remember the exhibitions organized by this remarkable woman to show the importance of Russian art. Let us remember the musicians and the writers, both Russian and foreign, who came to Talashkino. Stravinsky wrote a passage from his "Sacred Spring" upon the balustrade of one of Malutin's "teremki." Let us remember that it was Maria Tenisheva again who came to Diaghilev's aid and helped to organize the splendid magazine "Mir Iskustva" (The World of Art) which proved to be the domain of new conquests of art.

* "Teremok" or *terem* in ancient Russia was the back part of a house where women lived in complete seclusion.

One must keep in mind that it was not an easy task, in the end of the nineties of the last century, to break the bonds of "academism" and enter the ranks of the new art. Such a deed was never crowned by official laurels. On the contrary every movement in that direction brought forth an avalanche of enmity and slander. But Maria Tenisheva had no fear of it. Besides, indifference to calumny also proves to be one of the characteristics of selfless seeking for truth. There is no doubt that a weaker spirit than that of Maria Tenisheva could have found many reasons to give up the fight and to justify a withdrawal. Tenisheva, instead, turned into new spheres of activity. During the last years spent by her in Talashkino, she was attracted by the thought of building a church. We decided to call this church the Temple of the Spirit. The central place in it was to be occupied by the painting of the Mother of the World.

Our common work, which had bound us previously, was now more crystallized by our common thoughts about the temple. All ideas about the synthesis of iconographic presentations gave great joy to Maria Tenisheva. Many things were planned for the church in our intimate conversations.

The first tidings of the war reached us while we were at work in the church. The plans came to a stop and were never completed. But if the greater part of the temple's walls has remained unpainted, the fundamental thought of this undertaking, nevertheless, has been expressed, and this crowning bequest of Maria Tenisheva in Talashkino showed how true she had remained to her original tendency to build and believe in the future and in new ideas.

Later years held new wanderings for Maria Tenisheva, a complete change of her outward life and a revaluation of many people. I am

sorry that I have not with me, here in the Himalayas, one of her last letters, which should be quoted fully whenever an attempt to characterize her is made. In this remarkable letter she expresses the fulness of her understanding of contemporary events. Leaving aside her personal feelings, passing by national and other considerations, Maria Tenisheva without the slightest bitterness transports her thought into the future, speaking in still more unifying tones.

Having only her working table, a small studio and a tiny villa in the environs of Paris (I used to call it "*Small Talashkino*.") Maria Tenisheva found herself again free in her thoughts. She took no time for the appraisal of men's characters but spoke of the future—the future that is knowledge. The problems of art's heritage, expressed in the traditions and ornaments of the Far East not only had not faded in her eyes but had acquired an added brilliancy. Yet she did not become a theorist. No shocks could tear her away from life. She was working, filled as before with the desire to give people the joys of art.

Of the various kinds of art, Maria Tenisheva had chosen for herself the most difficult and the most monumental. Her enamels, founded upon the principles of the ancient, age-old industry, are spread widely throughout the world. Her symbolic birds Syrin, her white cities, her flowery glazes, her images of recluses indicate clearly the direction of her thoughts and creative work. The Fire Bird—of the enchanted country of the future—captivated and lifted her above everyday life. Here lay the source of her inviolable buoyancy of spirit and devotion to knowledge.

The enamels of Maria Tenisheva in French museums and in various private collections will be a living memory to her remarkable life and her strivings toward the Fire Flower—Creative Work.

At a time when great masses of people were in the tumult of contemporary questions, forgetting the future in the froth of current events, Maria Tenisheva was interested in the migration of peoples and the Gothic heritage and asked me to find, in the depths of Asia, the necessary data for her problems, repeating: "It is absolutely necessary to find it. These enamels and this flowery ornament must be confirmed."

Maria Tenisheva learned about our departure for Central Asia when she was lying sick in her Small Talashkino.

"Well, Father Nicholas," she greeted me at our last meeting, it seems as though you have really decided to build a temple." Her face bore an austere expression and she reminded one of an Old Believer as she lay in bed, covered with a shawl. As we were leaving Small Talashkino my wife said to me: "She is a true Martha Possadniza.* What strength, what austerity!"

I can imagine how glad Maria Tenisheva would have been to learn now, after our expedition, that her conjecture about the migration of peoples was entirely correct. And her joy would have been boundless could she have seen some of the ornaments, ascertained the analogy between Tibetan antiquities and those of Scythia and of Alan, seen Tibetan swords and fibulas which remind one of the so-called Gothic antiquities.

No one can say that Maria Tenisheva did not follow the right way.

Let us cite the names of those who at one time or other have collaborated with her and whom she held in high esteem. They were Vrubel, Nesterov, Repine, Serov, Levitan,

* Martha Possadniza stood at the head of the people of Novgorod when they were fighting Ivan III in the fifteenth century and urged them to unflinching resistance.

Diagilev, Alexander Benois, Bakst, Malutin, Golovine, Somov, Bilibine, Naumov, Zioglin-sky, Yakuntchikove, Polenova and also many others who had worked in Talashkino and in other studios and undertakings of Maria Tenisheva.

These names represent a brilliant epoch in Russian art—that epoch which brought Russia out of the narrow, national understanding and created her well-deserved reputation for her art, which it now holds.

And Maria Tenisheva, by choosing precisely this group of artists pursuing daring and diverse ideals, showed thereby the correctness of judgment.

Maria Tenisheva loved the old Russian church painting and valued it very highly. At the time when Russian church painting was still within the boundaries of the history of art and of iconographic investigations, Maria Tenisheva had already grasped the future artistic significance of this particular art. In her appreciation of the icons, as we now see, Maria Tenisheva had also followed the right road.

In promoting education and raising the level of Smolensk lower classes Maria Tenisheva was accomplishing a timely work, for the necessity of it was indeed evident. The correctness of her actions in this direction is incontestable.

To-day a large street in the city of Smolensk bears the name of *Tenishevskaya Street*. Indeed, many were the people who had walked along Tenishevskaya Street to receive enlightenment and still more are bound to go seeking predestined cultural possibilities.

In enriching the museums by the best examples of creative ability, Maria Tenisheva wanted to point out the importance for future culture of furthering the understanding of art and the esteem for this type of creative work,

One can always admire those who strove to lay the foundations of the future life.

About what has already been accomplished we speak briefly and lightly: "Let us remember all the schools, workshops, museums and the efforts to promote education." It can be expressed in a few words, yet think of all the labour, care and obstacles that each of these undertakings contains.

In turning to a broad understanding of religious principles it can be stated that here, too, Maria Tenisheva possessed opinions devoid of prejudices or superstitions, which were adequate to the demands of the near future.

Opinions, keen and to the point, can sometimes irritate small minds, but is not keenness of judgment an attribute of culture and civilization?

I look back on the work done by Maria Tenisheva with a feeling of joy. We must highly value people who are able to arouse in us such feeling of joy. May it follow her into the regions where she has departed, this feeling of joy, from the realization that she had yearned for a beautiful future and that her place is among those who are laying the steps of the coming culture!

Maria Tenisheva was a great woman—a true Martha Possadniza.

Many years ago, when making excavations in the province of Tver, we visited the grave of Martha Possadniza and heard the innumerable legends in which the people enshroud the name of this remarkable woman of Novgorod.

And I can now clearly visualize how gratefully the people of Russia will remember the name of Maria Tenisheva.

Many legends will be woven in Tenishevskaya Street and the name of Maria Tenisheva will be engraved among those of the true "constructors."

TO THE MOST HIGH.

By BARNETT D. CONLAN, FRANCE.

All we that know Thee are set free
From grasp of things ephemeral,
The shuttle of Mortality,
Which weaves with Time a constant pall
Of vain delights from us shall flee.

We know all things must pass and fade
And every rose of mere desire
Depose its petals here when laid
By this the all-consuming Fire
Where lambent blue meets lambent blade.

The Fire thrown from the Sword of Light
To cleave the folds of dragon Dark,
That wind their walls about our sight
Until the intense blue diamond spark
Shall mine their ramparts wrought of Night.

The blade is forged from jewelled seas
Whose waters leap to azure flame
From which the coming centuries
Shall glimpse the splendour of Thy name,
And on the hilt — the Pleiades.

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THE EQUAL BISECTORS OF THE BASE-ANGLES OF A TRIANGLE.

By MR. A. A. KRISHNASWAMI AYYANGAR, M.A., L.T.,
Mysore.

1. I have been frequently asked by several teachers as well as students of mathematics to give a simple satisfactory proof of the theorem: "If the bisectors of the base angles of a triangle be equal, the triangle is isosceles."

This theorem has a history behind it for which I may refer the reader to an article by J. W. Stewart in the *Mathematical Gazette* (London), Vol. XIX, p. 144, et seq. About a year ago, there was again an article in French by V. Thebault in Vol. XXI, No. 242, of the same journal. I wish, however, to draw the attention of the reader to a little theorem of mine published on p. 207 of my *New Geometry**, Madras, 1928, which is just a step behind the isosceles triangle theorem. The second problem in Paper X of the Revision Papers at the end of Book I of the *New Geometry* runs thus:

(A) ABC, DEF are two triangles in which $AB = DE$, $AC = DF$. If $\hat{A} - \hat{B} = \hat{D} - \hat{E}$, prove that either the triangles are congruent or $\hat{C} + \hat{F} > 180^\circ$.

Hence deduce that if the bisectors of the base angles of a triangle be equal, the triangle is isosceles.

2. The proof of theorem (A) follows from a suitable application of one triangle to the other and using the well-known theorem:

(B) If two triangles have two sides of the one equal to two sides of the other, each to each, and if the angles opposite to one pair of equal sides be also equal, then the angles opposite to the other pair are either equal or supplementary and in the former case, the triangles are congruent.

Thus, we may apply ABC to DEF so that (B, A) may coincide with (D, E) and C fall on the side of DE opposite to F. This is to enable each pair of angles (B, D), (A, E) to come in juxtaposition and coalesce into equal angles $\hat{FDG}$, $\hat{FEG}$, since $\hat{A} + \hat{E} = \hat{B} + \hat{D}$ ($\because \hat{A} - \hat{B} = \hat{D} - \hat{E}$).

If EDG be the new position of ABC, the quadrilateral FDGE is convex and we may join FG and apply (B) to the triangles FDG and GEF, which have

$FD = EG$, FG common and $\hat{GDF} = \hat{FEG}$.

The inference, now, is either $\hat{DGF} = \hat{EFG}$ or $\triangle FDG = \triangle GEF$.

So that $BC = DG = EF$ & $\triangle ABC \equiv \triangle DEF$;
or $\hat{DGF} + \hat{EFG} = 180^\circ$, which leads to $\hat{EGD} + \hat{EFD} > 180^\circ$,

i.e., $\hat{C} + \hat{F} > 180^\circ$.

The proposition is completely proved.

3. If BD, CE be the equal bisectors of the base angles B, C of a triangle ABC, it is obvious that the two triangles BCD, CBE are exactly in the same situation as the two triangles in theorem (A). For, $BD = CE$, BC is common, and $\hat{BDC} - \hat{DBC} = \hat{CEB} - \hat{ECB}$ (each side being equal to $\hat{BAC}$).

We have, therefore, to conclude

(i) $\triangle BCD \equiv \triangle CBE$ so that $\hat{BCD} = \hat{CBE}$ and $AB = AC$;

or (ii) $\hat{BCD} + \hat{CBE} > 180^\circ$, which is obviously out of question since two angles of a triangle are always together less than two right angles.

Hence, the first conclusion, viz., that the triangle ABC is isosceles is confirmed.

It is left to the reader to judge how far the proof sketched here may be felt to be satisfactory.

* This is a well-known text-book published by Srinivasavaradachari & Co., Madras.

THE ABNORMAL CHILD.

BY PROF. DIWAN CHAND SHARMA,
Lahore.

IT was a Swedish poet and author who prophesied that the twentieth century would be the century of the child; and his prophesy has come true. We have become increasingly aware of the personality of the child, and have come to attach much importance to its care and training. "The Child is Father of the Man", said Wordsworth in a moment of prophetic insight and the truth of this statement has been established by the investigation of many psychologists such as Freud. These investigators into child psychology have proved that the human personality in its essentials is developed in the first six years and that what follows is merely a confirmation, a deepening and a development of the instincts and impulses, of motives and urges, found during those early formative years. These psychologists therefore say, and they are right in what they say, that if we take care of the child, we take care of the future man. But we cannot adopt the traditional approach towards the up-bringing of the child as it has been done in the past. We must make use of all the data that physiology and psychology have placed at our disposal in the handling of children.

First of all, let us take the child, as it is, upto the age of five. Then its chief business is to keep alive and grow. The mother has therefore to see how the child gains in health, how it adds to its weight and height, what kind of food and clothes suits it best, and what kind of habits it forms in its sleeping as well as waking hours. But it is not only the physical life of the child that should be

looked into; the mental life should also be watched with great care for the moral, social and intellectual ideas of the child would be influenced by its environment, and by the materials with which he plays. The child should therefore be kept away from everything that is evil or mean or low and should be surrounded by those things which develop its latent powers. Only under proper conditions would the child grow into the normal child.

What the normal child is like has been expressed in a poem called 'The Island'. The hero of this poem, Christopher Robin, wants to sail through the seas and to satisfy his love of adventure. After having reached the beach, he wants to rest and say to himself:—"There is nobody else in the world and the world was made for me." He says further:

"I never did...I never did like 'Now take care, dear!'

.....I never did think much of 'Not up there, dear!'

It's no good saying it. They don't understand."

This shows the child's love of self-assertion and its hatred of all kinds of repression. Says a writer: "A child is characterised by independence and egoism which should be directed towards the development of the higher qualities of a good citizen." Again the child is sociable and therefore seeks companionship. A child's love of free movement is expressed in another poem called *Hoppity*.

"Christopher Robin goes
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Whenever I tell him
Politely to stop it, he
Says he can't possibly stop."

This means that the child loves to run, to hop, to jump and to skip and that it resents any kind of interference with its free movements. The child also loves to exercise its imagination on the everyday things of life. A poet has put the following words into the mouth of a child:—

"One of the chairs in South America
One of the chairs is a ship at sea,
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This shows how simple games and plays add to a child's store of information and call into play his imaginative faculties. Again the child is interested in nature and in stories. Says a psychologist: "As a child listens to these stories, he comes unconsciously under the spell of beauty and style in language and better feelings and emotions are stirred as the story leads to a discrimination between good and bad, and helps in the formation of moral standards and ethical judgments." Similarly a child acquires social standards through its games and sports, its environment and its associates.

But if this is true of the normal child, you will ask:—What of the abnormal child? The abnormal child is one in whom the normal characteristics of a child do not find their full and unfettered expression. "A child of this description may not come up to the intellectual, physical and moral scales of mea-

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Let us first of all take the morally defective child. In such a child the sense of obligation is deficient and it feels no compunction at doing immoral acts. This condition in a child may be due to bad heredity, defective training and unsuitable environment. It can also be due to the perversion of certain natural and normal instincts, and nervous disturbances. If these tendencies are not checked in time, the child becomes vicious, morbid and even criminal. Such a child should therefore be taken in hand by the social worker, the teacher, the parent, the physician and the psychologist as early as possible. First of all, the physical defects of the child should be remedied and it should be made to adopt a more hygienic mode of living. Then intelligence tests should be applied and a special mode of teaching should be determined for it. The social conditions and relationships of the child should also be inquired into. "The weak parent who 'spoils' the children, the morbidly anxious parent who nags and never leaves them alone, the stern parent who seeks to suppress, the ignorant parent who fails to provide stimuli and results of the right kind, the selfish parent who takes no interest in the children's development—these and others need to be reasoned with." In other words, the habits of the child should be reorganised, and its instincts redirected.

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If there are abnormalities to be noticed in children on the moral plane, they are also to be seen on the physical plane. These result in sense defects, abnormalities in height, weight, rate of growth and maturing, in nervous disorders of various kinds, such as epilepsy, hysteria, neurasthenia and dementia. It is not necessary to go into the symptoms of even nervous disorders but it may not be out of place to dwell on the causes of some of these. Epilepsy, for instance, is due to poor heredity, where the parents have been victims of alcoholism, venereal diseases and insanity. It is, however, possible to cure it by making the child lead a quiet, unexciting and orderly life and by removing all those factors which tend towards instability. In the same way, hysteria is due to the laxity of emotional control and sometimes leads to deafness, dyspepsia and paralysis. A child suffering from it should be unconsciously led to practise the principles of mental hygiene and should be encouraged to be in the open air. In every case scolding should be avoided. For the old adage "spare the rod and spoil the child" has come to be outmoded in the light of modern psychology. What a child needs most is 'Freedom'—freedom of movement, freedom of self-expression and opportunities should be provided for these things. A child suffering from neurasthenia suffers generally from headache and sleeplessness. It develops eccentric habits, becomes listless and timid, is a prey to terrors and is generally aloof. This disease is generally the result of heredity and narrow repressions, and its cure should be both physical and mental. First of all, irritant causes such as bad teeth should be

removed. Then the child should be made to take quiet rest and should be surrounded by an atmosphere of sympathetic understanding. It should be encouraged to mix with other children in games and should be kept busy as far as possible.

On the mental plane also we have several kinds of the abnormal child, such as the dull child, the backward child and the precocious child. The backward child is one whose mental growth has been retarded by disease or something else. Then there are feeble-minded children, imbeciles and idiots. These defects may be inherited at birth or acquired at an early age. They are characterised by bodily defects as well as defects in speech. Such children have a poor memory and are practically incapable of thinking. For such children special treatment is required which can be had in special clinics which are under the charge of men specially qualified for their jobs. In America and Europe we do have some schools for idiots and feeble-minded children where they receive training in agricultural arts, in industrial works and speech-training. Similarly, we have schools for the blind, the deaf, the crippled, the epileptic, the nervous and the mentally defective.

But whatever be the nature of abnormality in children, physical, mental and moral on the plus side or the minus side, it cannot be denied that the child has to be dealt with sympathetically. It should be taken in hand as early as possible and the parent, the teacher, the psychologist, the physician and society should all co-operate in remedying its defects as soon as possible and in turning it into a useful citizen.

S. S. L. C. PUBLIC EXAMINATION RESULTS.

BY MR. K. N. PASUPATHI, B.A., L.T.,
Kurnool.

THE Madras S.S.L.C. examination is one of the largest public examinations conducted in the world, and with thousands of candidates and hundreds of examiners and examination-centres, the usefulness and reliability of the test become greatly minimised. All the evils inherent in the subjective examination system are nowhere found in a greater measure than in our S. S. L. C. Public examination; the need for mitigating the evils and the necessity for a scientific and objective type of examination hence become obvious and imperative. And what with indifferent paper-setters and "Chief" Examiners, the S. S. L. C. examination is reduced to a farce!

In the recent S. S. L. C. examination, the paper in Elementary Mathematics was uniformly condemned as unsuitable by teachers throughout the Presidency, and it appears, if Dame Rumour is to be believed, that ingenious methods of manipulating marks were adopted by the Chief Examiner to arrive at a "decent" presidency average of 35% in that paper. In "manufacturing eligibles", a pass minimum of 18% of marks in Elementary Mathematics would appear to have been fixed, and as a result, a "fair" number of candidates has managed to pass the examination. But, of what use is this so-called "pass" or "eligibility", when the majority of the passed pupils cannot even secure entrance or admission into the Public Services Commission Examination to qualify themselves for clerkships? The Government is responsible for the conduct of both the S. S. L. C. and the Services Commission examinations, and it behoves the authorities to consider the serious anomalies and hardships caused to large numbers of our young men who face the

misfortune of having passed the recent S.S.L.C. examination without being fit even to apply for the Services Commission examination! Poor souls! they have to sit again for the "dreaded" S.S.L.C. examination and secure higher percentages of marks before thinking of becoming clerks in Government offices. The absurdity and injustice of the situation must be obvious to anyone who considers this aspect of the last S. S. L. C. examination results. It appears, judging from the marks entered in the S.S.L.C. books just now received in schools, that this year, a pass minimum of 35% in Mathematics, 23% or so in Optional History, besides the usual concession of 25% minimum in subjects other than languages, was fixed for increasing the percentage of passes, and perhaps for hushing the cry of the "Slaughter of the Innocents." But these minima will disqualify candidates for the clerkships' examination, where a minimum of 40% in languages and 35% in Mathematics, etc., is demanded.

Educational experts and educational conferences now rightly ask for the abolition of large, external public examinations, considering their serious defects, and unless the Madras S. S. L. C. Public Examination is properly and scientifically conducted, and careful attention paid to the selection of competent paper-setters and Chief and Assistant examiners, the evils of this large-scale public examination are bound to multiply. The S.S.L.C. Board who is responsible for the conduct of the examination, it is earnestly hoped, will bestow sufficient thought to this matter and at least in future avoid the unpleasant spectacle of candidates being artificially passed, their ridiculously low marks notwithstanding, and left in the lurch simply to swell the ranks of the discontented, unemployed and unemployable young men.

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MODERN EDUCATION AND CIVILISATION.

BY MR. BEPIN B. BANERJI, B.A., B.T.,
Calcutta.

"I HAVE no place wherein to lay my head". So said the Saviour nearly two thousand years ago. Has the world or, for the matter of that, this unfortunate country with which we are concerned been pushed forward and made a fit place to live in?

We vaunt of our civilisation and glibly speak of our railroads and automobiles, our gunpowder and machine, our law courts and politics, our banks and municipalities, our science and education and lay the flattering unction to our soul that we are more advanced than our goody-goody forefathers of old. We claim to have killed time and space and scaled the airy heights of culture and civilisation and are now out to invent means to fly to the moon and to draw rich viands from the chemical contents of the air.

But in the words of the Saviour may we not say, "what is a man profited if he shall gain the whole world and lose his own soul?" Does civilisation lie in the culture of the head or of the heart? Has not the culture of the brain, claiming as it did to afford some amenities of life, created the engine of oppression and turned the world into a hell? Don't teach negative virtues to children. This is a psychological maxim. But our system of education has thrown such an effulgence of light into all the dark corners of the mind that not a few of us have learnt to draw the veil skilfully over the evil propensities of our nature. How many of us have become rogues with a decorum! We haul up a man who decently relieves us of our purse in the streets (and there are so many members of this light-fingered gentry in our towns, theatres,

cinemas and trains) but in getting him safely out of his scrapes, do we not "make the worse appear the better reason" and that with the gravest face imaginable, as if the cause of the swindler is the cause of innocence injured and wronged by a cruel society? The episode of Alexander and the robber is repeated almost everywhere. Our education does not touch our heart and soul nor does it care for their culture. Divorced from religion and morality it has turned many of us into refined rogues and trained us to look upon truth as the hobgoblin of little minds. A "Civilised savage," said Weber, "is the worst of all savages."

What is modern civilisation? Is it not a mad hunt for filthy lucre and gay life? Are not the streams of people that pass and repass through roads, streets, lanes and bye-lanes of towns and villages every day, so many money-getting automata? The rush for money is writ large on their faces and nerves. How many of them think of living on an honest penny? In the market, in the exchange, in the law courts, in fact, almost everywhere, fleecing goes on without let or hindrance. It is strange that the grown-ups do not call in question the veracity of their teachers when they find in adult life that palaces are not built on the lofty maxims they have been saturated with in schools and colleges. Had these maxims left even a trace on their minds, then doctors would not have delayed cure and lawyers prolonged cases to make their pockets jingle. "Civilisation" said Amiel, "corrupts men as large towns vitiate the air."

Yet the people hanker after living under the toy municipalities of towns and avoid the bracing air of their parental homes in the villages. If streets, houses, vehicles and platforms bristle with T. B. and other fell diseases mostly imported from overseas in the train of civilisation, how can men preserve health in towns and how can a robust race be built up there? There are, besides, so many snares in big towns and cities that it is strange, as Lord Curzon once said, that men, particularly young men, can escape their wiles. "To combat may be glorious, but to fly is safe." This is the only antidote to temptation, but they will not fly, dazzled as they have been by the gaudy tinsel of modern civilisation.

John Bull meant business in this land of woe and planned a conquest not only of the land but also of the mind. This has now borne fruit and Macaulay's prediction of creating *sahiblokes* with Indian exteriors has been fulfilled to the letter. The campaign has now been turned to our womenfolk who, and not men, so long kept the Hindu ideals on their pedestals but who are now being lured to booted feet, tight corsets, typewriting and shorthand as the only avenues to emancipation. The queens of the household are to be the mistresses of the counting houses, while free love, social marriage, contraceptives—all seem ere long to make the conquest complete. Kicks in public and frowns at home have already become the portion of many an unfortunate wife in the land. "The test of civilisation is the estimate of woman," So said Mr. Curtis and this estimate is on its trial in this luckless country.

Driven from home or to win the gaudy banble of name and fame, men often fly to

politics to find in the end that politics for a downtrodden people are but the battling ground of intellectual wrestlers. They fight and quarrel and at last help to strengthen the "Divide et impera" which rules kingdoms and States all over the world. Talk as nervously as you can of democracy, it is one towering figure that holds in the palm of his little hand the sovereignty of the world; others may wrangle and fight as they do and found autocracy, monarchy, aristocracy, ergatocracy, socialism, communism, Bolshevism, feudalism and a host of other "cracies" and "isms", as the fine shades of their opinions dictate for the time being. To weld all these divergent elements into one and to infuse dynamic energy into the whole mass is the work of giants or fakirs who completely efface self to bring sunshine to every home. But self-effacement can rarely be expected from jackdaws who plume themselves in foreign feathers.

Among the lower strata of society who have not been favoured with the light of even the Three R's, not to speak of education, and who have not as yet plunged themselves into the quagmire of politics, one thing that troubles is hunger. Economic depression stares them in the face. The sub-infeudation of holdings and the low prices of agricultural produce have led many of them to run to the factories only to lose their body, mind and soul which once made them the pride of their country and cemented village life into a peaceful whole. Their small earnings are mostly devoured by the grog shops that have spread their net in towns, villages and hamlets; while the savings they can snatch from the gaze of touts, swindlers, thieves and robbers that now prowl about the country, are not enough to feed a brood of hungry

mouths and to save their womenfolk from the inhuman oppression that is being daily done on them in their unprotected and helpless condition.

Laws after laws are being enacted to meet this grave situation, which only proclaim to the world the existence of the evil instead of mitigating them. Their tyranny has of late become so great as to remind us of what Tacitus said even in his own time: "We suffer as much from wickedness as from the laws." They may scotch the evil for the time but cannot kill them, and establish truth and morality that alone can "fetch the age of gold."

Last but not least, in religion there are so many sects and sub-sects everywhere that very few can discern the little light that lies at the bottom of this endless verbiage. Even in a monotheistic religion like Christianity there are, as Mark Patison says in his Life of Milton, as many as twenty-two sects; while the quarrels between Shiah and Sunnis

throw into the shade the tenets for which the Prophet lived and died. If the differences in the same fold are so numerous and pronounced, what they are among different folds may be better imagined. Indeed religion and love have turned the world into a hell. Fanaticism, persecution, communalism and the guillotine set men against men and screened the face of the Lord, and we are now grovelling in the dark for the light that can alone bring peace and consolation to the mind.

It is, however, very happy to note that there are already signs in our predilection to old songs, dances, folklore and ancient faiths that we are about to revert to the primitive simplicity and to fall back on the help of the only Helper Who set myriads of planets, satellites and other heavenly bodies araving down infinite space and eternal time and Who, despite numerous sects and sub-sects in our religion, is the only haven of peace and rest for man.

A TEXT-BOOK OF ARITHMETIC for Lower Secondary or Middle Schools

BY

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SAMSON AGONISTES—DALILA—WEDLOCK—TREACHERY.

BY MR. T. KRISHNAMURTI, B.A., B. ED.,
Chodavaram.

BLINDNESS and unhappy marriage were the marked features of Milton's personal element in 'Samson Agonistes.' Of the former, his sighs more or less rend the air. He bitterly groaned.

'Why was the sight

To such a tender ball as the eye confined,
So obvious and so easy to be quenched?'

The latter was the pivot of the play, and in the mouth of Samson, the poet put several lines which voiced forth his feelings. He wrought the portrait of Dalila highly and elaborately.

She was at the outset invested with all possible outward charm. Persuasive grace was added to it. Inwardly, she was hardened and her heart was void of remorse and compunction. She spread the cloak of innocence over these, and hid them to some extent to achieve her purpose. With glib readiness, she invoked to her defence the most solemn motives, and in this she merely juggled with words. The word 'love' was on her lying lips, but not in her relentless heart. She was dexterously unscrupulous. In fact, Milton, no lover of women, put his best work and strongest feeling into the picture. Samson, in his captivity, first introduced her as a deceitful woman to the Chorus. The remark of the Chorus about her as a bad woman was a fit rejoinder. Samson cursed himself by taking her to wife saying 'that specious monster, my accomplished snare.'

He confessed before the Chorus and to his father Manoah how he unlocked all his heart to her. He referred to her treason against him. She made use of the weapons 'flattering prayers and sighs and amorous reproaches' in winning the capital secret from him. She 'mustered all her wiles with blandished parleys, feminine assaults, tongue-batteries.' He ought to have displayed his manhood by shaking off all her snares. His 'servile mind was rewarded well with servile punishment.'

The Chorus applauded Samson for repressing the desire for wine. Samson reproached himself saying that temperance was of no avail to him. He referred to his being enticed by a wicked woman, and said:—

'What boots it at one gate to make
defence,
And at another to let in the foe,
Effeminately vanquished?'

At that time Dalila appeared on the scene. Milton described her thus:—

'An amber scent of odorous perfume
Her harbinger, a damsel train behind.
Some rich Philistian matron she may
seem.'

She wept, and her tears wetted the borders of her silken veil. She told Samson that she went there with doubtful feet and wavering resolution. She dreaded his displeasure. Her 'conjugal affection prevailed over fear and timorous doubt,' and infused into her a desire to behold his face once more. She

proposed to make amends to recompense her rash misdeed.

Samson termed her hyaena. Breaking faith was her wonted art. Her repentance was only feigned. Dalila invoked his pardon by saying :—

'It was a weakness
In me, but incident to all our sex
Curiosity, inquisitive, importune
Of secrets, then with like infirmity
To publish them, both common female
faults.'

She pointed out to Samson that he ought not to have yielded to her importunities. He was fully aware of 'Frailty, thy name is woman,' and hence he was forbidden from imposing any trust in her. So he was cruel to himself, and wrought self-destruction.

She attributed her love for Samson as the sole cause for what she did. She learnt the secret of his strength mainly to get him into her power. In divulging the secret, she said that she was more than assured that nothing was designed against him but safe custody and hold. She feared that liberty would draw him forth to perilous enterprises. To have him always with her, she had recourse to that strategy, and she said :—

'Here I should still enjoy thee, day and
night,
Mine and love's prisoner, not the
Philistines,
Whole to myself, unhazarded abroad,
Fearless at home of partners in my love,
These reasons in love's law have passed
for good,
Though fond and reasonless to some
perhaps'.

Samson took her for a seeming sorceress, and remarked :—

'If weakness may excuse,
What murderer, what traitor, parricide,
Incestuous, sacrilegious, but may plead it?'

He reprimanded her strongly saying that her plea of weakness would gain her no remission with God or man. He did totally disbelieve her love argument. His love for her was transformed into inexorable hate. In referring to her betrayal, he said :—

'In vain thou strivest to cover shame with
shame,
Or by evasions thy crime uncoverest more.'

Then Dalila confessed her fault by narrating the various snares of soliciting, persuasion, command, threat, etc. She also made mention of the priest saying about him :—

'And the priest,
Was not behind, but ever at my ear,
Preaching how meritorious with the gods
It would be to ensue an irreligious
Dishonourer of Dagon.'

She frankly confessed that she lacked the power to oppose such strong arguments. Her love held long debate, and combated in silence all those reasons with hard contest. At last the maxim, 'to the public good, private respects must yield,' prevailed over her, and she betrayed him most ignominiously.

Samson was infuriated, and said that her circling wiles ended in feigned religion and smooth hypocrisy. Her love was odiously pretended. He was suicidal in first selecting her from a hostile tribe. His love was always as fresh as marriage vows, and he unbosomed all his secrets to her, and he denied her nothing. In such a case, he was at a loss to know how she confederated with his enemies to aim at the life of such a venerable husband. He referred to the duties of a wife saying :—

'Being once a wife, for me thou was to leave
Parents and country.'

Her pleas, the love of country and religion, were equally poised with regard to futility. He condemned the gods of her country violently saying :

'Gods, unable
To acquit themselves and prosecute their
foes

But by ungodly deeds, the contradiction
Of their own deity, gods cannot be.'

These false pretexts made her bare in her guilt, and she appeared very foul.

Dalila expressed :—

'In argument with men a woman ever
Goes by the worse, whatever be her
cause.'

Samson retaliated :—

'For want of words, no doubt, or lack of
breath !

Witness when I was worried with thy
peals.'

Dalila regretted for her past folly, and once more implored pardon. She showed her readiness to recompense. She promised to intercede on his behalf with the lords, and fetch him forth from the prison house. She prayed him to abide with her. Redoubled love and care yoked with nursing diligence were glad office to her. She promised to tend him gratefully to old age. She hoped that he would least miss what he lost by her.

Samson viewed her offer in a different light. He asked her to be unmindful of his condition. He was by this time wary enough not to bring his feet again into the snare where once he was caught. He was conversant enough with her trains. Her warbling charms lost all power over him, since their force was nulled by his bitter experience. He made up his mind to fence his ear against her sorcer-

ies. All men loved, honoured, and feared him in his flower of youth and strength. She, his notorious wife, was an exception for she hated him, slighted him, sold him, and thus did forego such an inestimable husband. He wondered how she would then use him when he was blind, and thereby deceivable, helpless, scorned. He feared tremendous insults when he must live uxorious to her will in perfect thralldom. He was more or less prohibited from entering her house. When compared with her house, the jail was a better house of liberty for him.

When she proposed to approach him, he threatened to tear her joint by joint. He could not repress the sudden rage waked by fierce remembrance. He could forgive her at a distance. He advised her to bewail her falsehood. He asked her to cherish her hastened widowhood with the gold of matrimonial treason.

Dalila unveiled herself. Till then the serpent in her was concealed. She became manifest by the sting discovered in the end. She found Samson implacable. He was deaf to her false prayers. He could no longer be caught in her snares. There was little chance of victimising him. His anger was unappeasable. In her swiog for peace, she reaped nothing but repulse and hate.

Then she appeared in her true colours. She said :—

'Fame, if not double-faced, is double-
mouthed,
And with contrary blast proclaims most
deeds.'

She was prepared to leave a bad name, in the country of Samson saying,

'To all posterity may stand defamed,
With malediction mentioned, and the blot
Of falsehood most unconjugal traduced.'

But it would be different in her country.
 She said :—
 'I shall be named among the famous
 Of women, sung at solemn festivals,
 Living and dead recorded, who, to save
 Her country from a fierce destroyer, chose
 Above the faith of wedlock bands.'

She desired the good opinion of her country. She recked little for the opinion of her husband's country. She gloated over the public marks of honour and reward conferred upon her by her country. For the sake of her country, she did not deem it heinous to betray her husband. With these remarks, she left Samson to his lot, and went her own way. Her spurious arguments bewildered one and all. Samson remarked :—

'God sent her to debase me,
 And aggravate my folly, who committed
 To such a viper his most sacred trust
 Of secrecy, my safety, and my life.'
 With much inward passion felt, and secret
 sting of amorous remorse, he said :—

'Love quarrels oft in pleasing concord
 end,
 Not wedlock-treachery endangering life.'
 The Chorus remarked :—
 'It is not virtue, wisdom valour, wit,
 Strength, comeliness of shape, or amplest
 merit,
 That woman's love can win, or long
 inherit ;
 But what it is, hard is to say,
 Harder to hit,
 (Which way soever men refer it.)'
 They further added :—
 'Is it for that such outward ornament
 Was lavished on their sex, that inward
 gifts
 Were left for haste unfinished.'
 They concluded :—
 'Favoured of Heaven, who finds
 One virtuous, rarely found,
 That in domestic good combines,
 Happy that house ! his way to peace is
 smooth.'

OUTLINES OF THE GEOGRAPHY OF THE WORLD

Prepared in accordance with the Syllabus in the subject for the S. S. L. C.

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WITH A FOREWORD BY

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PART I. THE SOUTHERN CONTINENTS & NORTH AMERICA. **As. 12**

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PART II. EURASIA AND THE WORLD IN GENERAL. **As. 12**

With numerous Maps and profusely illustrated.

SRINIVASA VARADACHARI & CO., 190, MOUNT ROAD, MADRAS.

VANAPRASTHA.

By MR. K. SUNDARAM AIYAR, B.A., B.L.

Tatanagar, B. N. Ry.

It is the greatness of the Eastern Aryan Vedic Rishis that they regulated man's life into *Ashramas*—stages from childhood to old age with due regard to the capacity of the individual and the many races composing the Aryan society. It was a course of discipline of the mind as well as of the body. While the other races stumbled unawares into these principles it was the Aryan seers of life who made a systematic and serious effort not simply as an intellectual diversion to probe into the mystery of life but apply the result thereof in all the possible channels to regulate the flow of man's activities. For the present let us take *Vanaprastha*, the third stage in the scheme of the life of the average Aryan.

The first question that will stare before us will be, is it worth while to revive old institutions in the face of the modern schemes of life? The only answer is that in human social problems there is no finality. They are changing with the times. Further, Indian genius can work only on the traditions of its own past and that will only be the rational as well as practicable way. While other systems however enchanting cannot be engrafted to the Indian mode of thought coming down through centuries of conflict and readjustment the Indian plant can grow only on the old roots. Of course the problems of the present day world are more complicated than on previous crises on account of the highly complex life of the world, by the greater intermingling of races, with the Gordian Knot of economic, social, religious, political and other riddles bewildering to the thinker who wants to see through the mist. Further the extraordinary physical, mechanical conveniences giving amenities to human wants too numerous to mention except cryptically stating it as "mechanisation" have further put the problem far off from a rational remedy.

The ancient Rishis knew that the effective mainsprings of human life are *Dharma* (law), *Artha* (acquisition), *Kama* (the life of the

senses) and *Moksha* (the reflective). On every act of human life they can be seen through. To those ancient Rishis life was an organic unity. But for purposes of facility they tried to locate them in more or less proportion in the seemingly apparent simple acts of life so as to give greater or less emphasis according to circumstances.

Of the four, the reflective the last, being purely negative, is a province where the assertions are contradictory. In the first stage of life when the mind and the physical frame are young and pliable a strict discipline of the tongue, mind and body is rigidly insisted upon. In the next stage—the period of full activity—there is relaxation from the Spartan simplicity, but yet the negative, the reflective, the relaxing, side of human life is not lost sight of. After a certain number of years of active life when the physical frame declines in vigour man yearns for a little respite. Those who are thus sufficiently inclined in a more or less degree are given the choice of either of the two stages.

In the innermost core of the human mind there is a deep hankering for respite. That is the background on which the scheme of the *Vanaprastha* and *Sanyasa* are brought into clear prominence, given a momentum in the first stage of life and touched lightly but none the less kept alive during the active *Grihasta* stage. The *Vanaprastha*—having the minimum of active competitive life—is mid-way between the purely active life of the householder and the life of those choice few who can retire altogether from active human life their minds being pitched on the eternal verities of the Great Mystery.

The part played by the *Vanaprastha* in the life of the people from the dim past, through countless centuries, will be an instructive and illuminating chapter in the life of the ancients and as a beacon light for the present.

SCIENCE AND SCIENTIFIC VALUES.

By MISS A. PONNAIYA, M.A.

Bangalore City.

FOLLOW the Gleam! Mystic forms of unearthly splendour, grandeur, magnificence, and magnetic attraction sparkle soulfully and draw men in their quest. A light swims before one, a noise of hymns is heard by another, and a third hears a voice to find no one behind it. And still, the mystic presence holds them by virtue of a strong spell, and leads them on to high endeavour. Now, the rustle of their garments, now the soul-enrapturing beauty and fleeing forms and now their soul-stirring melody of music shake men from their 'smug satisfaction' and 'content,' and make them shed apathy and indifference like autumn leaves. Whence comes this consuming fire of divine discontent, the desire for the unattainable, like that of the moth for the distant star? Forms of ethereal beauty have had power to hold some mortals spell-bound, like the Ancient Mariner, the Wedding Guest. The larger vision of the infinite has been granted unto them by drawing the veil for one brief bright hour, where mortal spirits have communed with these grand souls and vowed their allegiance to them. Thus, it is that people with a single heart, and an "impersonal purpose" waive aside easily limitations set by time and hard work, and rise above it. Like Ulysses of old their spirits yearn in desire to follow knowledge, and are made of such stuff out of which heroic hearts are turned out, so that they are

"Made weak by time and fate, but strong in will,

To strive, to seek, to find, and not to yield."

Drudgery with its menacing finger and form finds them undaunted, and bold, and draws out their nobility as true workmen. Their impersonal purpose surrounds them with a bright halo, brighter than that which surrounded the heads of the prophets and philosophers of old. They are so enriched, enlarged and ennobled, that they are ready to follow their ever-moving ideal even at the cost of their torn hands and bleeding feet. They are as it were dedicated to the service of their ideals. With loins girt, and torches held high they are ready to plunge into the deep caverns of ignorance, or climb the steep and dizzy heights of hard work. Naught has power to sever their unannulled ties. Their spirits in humble homage are uplifted and sublime. Why then, this pursuit which entails undivided attention and energy? Will nothing short of it satisfy? No. The quest of Truth requires something more than Spartan discipline, and half measures are the least satisfactory. And Truth is 'precious and divine', and

"Has such a face and such a mien,
As to be lov'd needs only to be seen."

The goal is Truth, and science is the adventure by which man gets to it. 'What is Truth?' said the jesting Pilate, but did not wait for an answer. The mind soon wearies tracing the footsteps of the Almighty, as it is too puny to grapple with the infinite. Truth seems veiled, and mortals may only see it darkly as 'through a glass.' Why, then is man lured into this imperfect quest, if it were not for that great hope in him that he may see it later 'face to face'?

The windows of our body are daily opened to a beautiful vista of lovely sights and colours and impressions. Nature unfolds to our view its amazing panorama ever fresh and ever new. These feed, fan and enkindle the spirit of wonder and enquiry. A child born into a 'blooming, buzzing' world of noise and confusion finds out soon by interested curiosity, the why's and wherefore's for his problems. He finds that out of the seeming 'chaos' there is an orderly evolved 'cosmos.' The beauty of nature that appealed to his senses without, makes soon its appeal within. The three symbolic types of reverence offered to Wilhelm Meister by the three groups of children in one of the countries he had visited in the course of his travels, would suitably illustrate the attitude towards science at each stage. The first and youngest group looked up into the sky cheerfully and laid their hands across their breasts. The second or middle group stood gazing gladly all around their surroundings, while the last and the oldest group, frankly and spiritedly, stretched their arms downward and seemed in a search for something below. These are the three gestures or symbols we may employ for a child who dares to venture forth into the unknown realms of science. There is the type of behaviour which is found in the first group, or the initial stage, when the upward gaze is most symbolic of the soul being sufficiently filled with wonder and awe to be uplifted, to look up to the Creator. An almost parallel of this is cited by Carlyle in the Childhood of Spiritual Life, where the earth is considered as a mystic temple and its business a sort of worship or by Wordsworth in his Prelude before his experiences of the French Revolution, so that we may call this stage, as some have already done, as 'the worship of wonder'. The call of the unexplored and unknown is

imperative, urging and entreating. Now faith gives place to hope, and the newly awakened soul passes into the stage of a newly stirred mind. The boy struggles to satisfy his curiosity, and there is an inner prompting to delve into the mines of knowledge and bring out rich stores to satisfy his mind. Now comes the reverence for all creation, and science is to be the guide as Nature was to Wordsworth as that alone has the power of harnessing the wildest powers of Nature, and giving knowledge. This knowledge brings power in its train, and the boy imbibing power from this source is exultant and jubilant. The knowledge that brought power is terrible and the partial rending of the veil of the Truth helps him to feel the intensity of pain. So at the third stage, the third group looks downwards with sorrow, and looks up to science to remove ignorance, want, disease and death. Their souls and minds are face to face with a problem, hard as nails and harder than flint. The third counterpart of their spirit, *i.e.*, heart, now is born. As the oyster exudes as a sort of healing for its wound the secretion from its own very substance, and forms the precious pearl, so also man coming into hard eye-opening contact with suffering humanity develops his heart. Thus charity now fills his whole being for humanity at large where only faith and hope first lived, and becomes the in-dwelling divine essence and effulgence in fragile man. The development of the man is rendered harmonious and perfect after the divine pattern. And this is the last and third stage that science leads us to. Look at the numbers of doctors and nurses who count their life as nothing, and are prepared to lose it if perchance it may help to find themselves to rise above their dead selves, and help them to serve humanity best by alleviating pain, suffering, sin and misery in the

world. These hear the 'still, sad music of humanity' and have attuned harmoniously their hearts, souls and minds to the divine symphony once heard but never forgotten, ready to worship and to adore. Let us look into the lives of some of these great scientists and see how they have achieved their ends.

Galileo was put in prison because he dared to state that there were spots in the sun. He had to wage war against ignorance and superstition and fight the empirical way of thinking with his weapon, the experimental way of thinking, with an intelligent insight into the guiding principles. Even this scientist knew his own limitations. He realised that human intelligence at its best was only the faint image and shadow of the Highest. His contemplation of the unknown in spite of his wisdom did not blind his imperfect sight and drown him in the depths of vanity. The same is true of Sir Isaac Newton who speaks of his discoveries and scientific researches with the utmost humility. "After all I have been like a little child picking up a few pebbles on the sea-shore of the great ocean of truth." Is it not striking that all the seekers after truth have been able to gather bits of Truth only after they have become like little children! Out of the formless chaos of data like what we have, he questioned why an apple could drop down and the moon not. He was able to verify his hypothesis and formulate his law of gravitation by observation under controlled situations. Not only was Sir Isaac Newton a great thinker, he was a great observer too. His play instinct was harnessed into constructive channels like the mill, the water-clock and the sun-dial.

What a stupendous marvel of patience Darwin was! Day and night for weeks and

months none but a Darwin could have had the patience to sit and watch the movements of microscopic filaments. For two and a half decades, who could have observed and recorded particular insects associated with particular flowers, season after season? This drudgery gave him the key to the problem when the colonists in New Zealand were unable to have their imported clover set seeds. The importation of humble bees as per Darwin's advice saved the further import of clover seeds.

And that childlike simplicity, or open-mindedness to suspend judgment, even though contrary to one's own convictions, is also the characteristic of some of our great scientists. Newton was ready to abandon his corpuscular theory of light for the wave-motion of light, when there was adequate experimental proof. Kepler was ready at the sight of proof to change his ideas of a circular orbit into an elliptical one. They had the germs of greatness in them, for they were ready to correct, to observe, to re-adapt and to re-test their experiments and revise their theories impersonally. Suspended judgment no doubt is one of the triumphs of intellectual discipline, while scientific truths are said to be pragmatic. It was Descartes who very truly said: "Science is born of doubting." Verification is the essence of science and all rigorous criticism leaves it unscathed but purer and more refined from its dross than it was before.

Archimedes' life was in jeopardy if he failed to find the method of evaluating pure gold. He was in peril of his life and the problem was knotty and baffling. Here was a man who did not mind risking his life for the great cause. The solution for the problem only

flashed into his mind when he had his plunge in the water. Professor Faraday was prepared to espouse the cause of undowered science when he had the option of choosing a fortune of £150,000. Similarly Pasteur and Tyndall also refused to be bought over by monetary considerations. Their motive in scientific work seems not to be a utilitarian one. For, Maxwell, when he discovered the theory of Light, did not do so with the idea of providing a large number of our homes with a wireless set. The question "what is the use"? put by a lady, to Professor Faraday, during his demonstration when he brought a magnet near a coil of wire and produced electricity shows just that difference between a layman and a scientist. Faraday's answer to the question was: "Madam, will you tell me the use of a new-born child"? But when the same question was asked by Gladstone as to its use, Faraday predicted that it might even be 'taxed'—Thus scientific work is motivated by the joy of discovery, by the love of truth and knowledge.

Or who could beat Sir Isaac Newton in the sweetness of his temper? For a score of years, Newton had been hard at work on the theory of light. And when his little dog was accidentally instrumental in reducing to ashes the fruit of the two decades' hard labour that lay in a heap in the manuscript form, who could have the forbearance to pat the dog and only say: "O, Diamond, Diamond, thou little knowest the mischief thou hast done"? This is a divine leniency characteristic of this great scientist, whereas another would have sentenced the dog to death. Thus the many-faceted values of great scientists stand out to our view as we look down the vista of the past ages.

But, what are the things that a child is initiated into, when it learns science? Science we are told "is the perfection of laws", "obeying a hierarchy of principles," "the ideals of form and knowledge." The mathematicians shy at an inelegant proof, however convincing it be, because the sensibilities of elegance and beauty of mathematical problems, make them resort to "prose-poetry", rather than descend to pure prose. In the actual solving of the problem the beauty of the method by which it is solved rather than the solution, is of great interest. This search for universal laws, and the symmetry of forms gives it an aesthetic touch, and simplicity is said to be one of its virtues.

Similarly, in the realm of natural science, the Newtonian concepts and the theory of evolution are the attempt at the formulation of ideas which were in the air for many years. Chemistry is said to give insight and control over nature, and the atomic theory is the much admired part of it. The cultural aspect of biology is said to lie in its variety of structure and life and habit—an endless variety breaking monotony. Science is thus found to make a universal appeal. And in the beauty of development it obeys laws that are beautiful. Truth is for a fact beauty here; science is an art; and the scientist is an artist whose creation is an imperfect copy of the partially unveiled truth revealed to him.

Science being a supreme work of art is "the prophetic soul of the wide world." The developments brought about by science are respect for individuality, breaking down of physical barriers, introducing inter-dependence among nations, control over wild nature and the realization of the universal brotherhood of the world. Civilization with

the changing times stamps out superstition and ignorance till only the tested thought is accepted in the place of empirical thought. To reason objectively, to examine critically and to eliminate the irrelevant lead to lesser liability to error, give ability to manage the new and create interest in the future.

So, the long quest is not fruitless because our strength has been equal to our task. Our powers are disciplined, our vision made keen, our sympathy enlarged, so that we are endowed with a breadth of perception and keen appreciation. The eyes that were once dazzled and blinded by the brilliance of the vision are now tempered and toned to see it. Our spirits are enhanced in beauty and enriched in content that one simply marvels how one could have ever been in the state of smug content and satisfaction before. And like the youth who passed through an Alpine village, with 'Excelsior' on his lips we would nothing daunted pursue our ideals.

And what has the most recent branch of science—psychology—to contribute to this? Our unharnessed impulses, and hard to be bridled instincts are to be forced into channels which are socially approved by the process of sublimation. Science knows no excuses for projection, because the causes of failure are within its control and can be operated upon. A scientist also learns how to keep up his mental hygiene, and therefore is neither a pessimist nor a fatalist. Cheerful optimism inspires him to look for

something fresh, and something new, whether in the highways or in the byways. Life is worthwhile and pleasant to him because his mind, body, and soul are in unison with the eternal purpose. There is no need for temporizing and rationalization, when there is auto-suggestion, like the Sister of Mercy, beside one. There is suggestion, service and charity for the neighbour and an understanding sympathy which knows all the weaknesses, forgives all, and yet is charitable, to help the lame dog over the stile. Auto-suggestion is the redeeming part of this new science where man becomes childlike and empties out his vessel filled with pride, egoism and vanity for the divine to fill in. The divine contact is provided by the live-wire of prayer. Truly was it said that

"More things are wrought by prayer,
Than this world dreams of".....

This science also helps us to be good dreamers. The intensity of our dream or desire most often sees its fulfilment. Unworthy desires which tinge and darken life may be sublimated to worthier ones, so that these good desires may be translated into action. And mental ill-health, and complexes could be cured by mental therapeutic measures. The good dreamers are thus found to have a clear vision for execution.

Thus the mortal begirt with limitations and imperfections walks with God, the Illimitable, the Infinite, and the Perfect.

COINAGE OF WORDS.

BY MR. S. KUTTALAM PILLAY,
Mettapalayam.

(Continued from page 289.)

THE sound of the letter M of Man is produced by shutting the lips and trying to let the voice issue through the nose. Hence, M has two significations, *vis.*, (1) "shutting the lips" which symbolises "that silence is gold," and (2) "trying to let the voice through the nose" which symbolises "that Man alone can get information from Mahadeva." For, when we try to produce the sound of the letter M, we hear a sound from the nose. Not only this, but also the letter M, which is the final letter of the sacred word Aum, stands for "Mahadeva." Hence, when we say that the letter M has two significations the particular number 2 indicates "that Man should know the two principles (1) evil, and (2) good (*Vinai* two)." In the Ibraic and Arabic languages, even one curve (3) is quite adequate to represent the sound of the letter M. Accordingly, M has only one distinct sound in English, as in Man. But here, in English, the Egyptian hieroglyphic form only is adopted to represent the small character m and the modification of the Ibraic square characteristic form is adopted to represent the capital letter M. Here, when we say that the letter M has only one distinct sound, the particular number 1 signifies that Man alone can have union with Mahadeva, the Supreme Being, and Man is the only being who can merge into the divine.

When we try to produce the sound of the letter a of Man, the middle of the tongue-ridge is slightly raised, and the opening of the mouth is generally larger than that of the other vowels. Hence, this letter a also has two significations, *vis.*, (1) "raising the middle of the tongue-ridge a little" which

marks "that Man is raised above the animal kingdom," and (2) "opening the mouth to a certain extent," which marks "that Man has voice over other animals."

Here, when we say that the letter a has two significations the particular number 2 indicates that Man should shine like the two kinds of souls, Paramanma and Jeevanma (*Anma* two).

The printed small character a is made up of only eight strokes when written as a square character with breaks. Accordingly, a has only eight sounds in English, *vis.*, (1) the short a, as in Man, (2) the long a, as in Lane, (3) the broad a, as in Ball, (4) the long broad a, as in law, (5) The short broad a, as in what, (6) the Italian long a or open a, as in Father, (7) the Italian short a, as in India, and (8) the slender a, as in share. Here, when we say that the letter a has eight sounds, the particular number 8 signifies that Man should know that the fiery breath Theiyu which goes eight inches upwards when the exhalation is going on, is the cypher key to get Wisdom, and Wisdom is obtainable only from the eight letters M a h a d e v a, the Supreme Being. (Confer the Tamil letter *அ*, the abbreviation of the word *அணி* (*Agni*) which means Theiyu, without loop which is the sign of the number eight.)

The third and final letter n of Man is produced by placing the end of the tongue against the roof of the mouth, and trying to let the voice through the nose. Hence, the sound of the letter n also has two significations, *vis.*, (1) "placing the end of the tongue against the roof of the month," which signifies "Sociality which is indispensably necessary

for Man," and (2) "trying to let the voice through the nose," which here signifies "News, the information that Man alone can get from the four quarters of the globe, North, East, West and South." For, here also, when we try to produce the sound of the letter n, there comes a uniform sound through the nose. Here, when we say that the letter n has two significations, the particular number 2 denotes "that Man should have a thorough knowledge of the two kinds of eyes, *vis.*, (1) the inward eye, and (2) the outward eye." (*Kan* two).

Even three strokes are quite adequate to represent the capital letter N in ordinary writing. Accordingly, N has only three distinct sounds when the phonetic representation is taken into consideration, (1) the simple and pure N, as in Nice, (2) the compound and mixed N, as in thank, and (3) the ng sound N, as in Anger.

Here, when we say that the letter N has three distinct sounds, the particular number 3 signifies that Man must abide by Trinitarianism.

Now, we have proved that every letter of Man is phonetically symbolic. In olden times, every phonetic representation was denoted by a numeral. Hence, the language was placed on a numeric basis. And hence, the next problem to be solved is how to account for the numeric basis of the word Man.

The Arabians were the first nation who learnt mathematics from the Indians, the earliest of all the civilized nations. Hence, before entering into the subject very deeply, it is better to see how far the Arabian notation agrees with the coinage of English words. According to the Arabian notation, the Intrinsic Value of the word V A L U E

6 1 30 6 5 is 3. (To find out the Intrinsic Value, sum up all the digits till they become one digit). Hence Value is of three kinds, *vis.*, (1) the Intrinsic Value, (2) the Digital Value, and (3) the Numerical Value.

As there are only 26 letters in the English Alphabet, let us take only 26 examples from the English language to prove the Intrinsic Value of words according to the Arabian notation.

English Letters.	Their Phonetic Value according to the Arabian Notation.	Examples. N. B. I. V. = Intrinsic Value.
a or A	1	A n a l y t i c (Adjective) 1 50 1 30 10 400 10 3 The I. V. is 1. Hence, "Resolving into <i>first</i> principles."
b or B	2	B e e s t i n g s (Noun) 2 5 5 60 400 10 50 3 60 The I. V. is 1. Hence, "The first milk drawn from a cow after calving."
c or C	3	C r o w n (Noun) 3 200 70 6 50 The I. V. is 5. Hence, "Especially, the silver 5s. piece."
d or D	4	D i m e (Noun) 4 10 40 5 The I. V. is 5. Hence, "5d."

COINAGE OF WORDS.

JUNE 1938.]

English Letters.	Their Phonetic Value according to the Arabian Notation.	Examples. N. B. I. V. = Intrinsic Value.
e or E	5	E s e m p l a s t i c (Adjective) 5 60 5 40 80 30 1 60 400 10 3 The I. V. is 1. Hence, "Shaping into one."
f or F	8	F i r s t b o r n (Noun) 8 10 200 60 400 2 70 200 50 The I. V. is 1. Hence, "Born first."
g or G	3	G a l l o n (Noun) 3 1 30 30 70 50 The I. V. is 4. Hence, "The standard measure of capacity = 4 quarts."
h or H	8	H a n s e l (Noun, originally Handsale) 8 1 50 60 5 30 The I. V. is 1. Hence, "The first sale or using of anything."
i or I	10	I s m a i l (Proper Noun) 10 60 40 1 10 30 The I. V. is 7. Hence, "Ismail was the 7th and last of the Imams."
j or J	3	J a n u a r y (Noun) 3 1 50 6 1 200 10 The I. V. is 1. Hence, "The first month of the year, dedicated by the Romans to Janus, the God of Opening."
k or K	20	K e m p (Noun) 20 5 40 80 The I. V. is 1. Hence, "One who fights in single combat for himself or for another;" "a champion."
l or L	30	L o r d s d a y (Noun) 30 70 200 4 60 4 1 10 The I. V. is 1. Hence, "The first day of the week."
m or M	40	M u h a r r a m (Noun) 40 6 8 1 200 200 1 40. The I. V. is 1. Hence, "The first month of the Mohamedans."
n or N	50	N e w y e a r s d a y (Noun) 50 5 6 10 5 1 200 60 4 1 10 The I. V. is 1. Hence, "The first day of the new year."
o or O	70	O r i g i n (Noun) 70 200 10 3 10 50 The I. V. is 1. Hence, "The first existence of anything."

English Letters.	Their Phonetic Value according to the Arabian Notation.	Examples. N. B. I. V. = Intrinsic Value.
p or P	80	P a p p u s (Noun) 80 1 80 80 6 60 The I. V. is 1. Hence, "The first hair on the chin."
q or Q	3	Q u i n t i c (Adjective) 3 6 10 50 400 10 3. The I. V. is 5. Hence, "Of the fifth degree."
r or R	200	R e c t a n g l e (Noun) 200 5 3 400 1 50 3 30 5 The I. V. is 4. Hence, "A four sided figure with all its angles right angles and its opposite sides equal."
s or S	60	S k e t c h (Noun) 60 20 5 400 3 8 The I. V. is 1. Hence, "A first draft of any plan or painting."
t or T	400	T e t r a g o n (Noun) 400 5 400 200 1 3 70 50 The I. V. is 4. Hence, "A figure of four angles."
u or U	6	U n i p l i c a t e (Adjective) 6 50 10 80 30 10 3 1 400 5 The I. V. is 1. Hence, "Once Folded."
v or V	6	V e d a s 6 5 4 1 60 The I. V. is 4. "The four holy books of the Hindus."
w or W	6	W a g o n (Noun) 6 1 3 70 50 The I. V. is 4. Hence, "A four-wheeled vehicle for carrying heavy goods."
x or X	70	H a l l u x (Noun; The suffix x) 8 1 30 30 6 70 The I. V. is 1. Hence, "The first digit of the foot."
y or Y	10	D a i l y (Adverb; The suffix y) 4 1 10 30 10 The I. V. is 1. Hence, "Every day."
z or Z	700	Z e u g l o d o n (Noun) 700 5 6 3 30 70 4 70 50 The I. V. is 2. Hence, "A fossil whale-like mammal, so named by Owen from the yoke-like double-rooted formation of its cheek teeth."

What is the Intrinsic Value of Man?

Now, the Intrinsic Value of M a n is 1. What does this number 1 indicate?
40 1 50

It indicates "that Man stands foremost in the list of the animal kingdom."

(To be continued).

POET PARMANAND'S TIME AND PLACE.

BY MR. G. D. TAMASKAR, M.A.,

Jubbulpore.

WHILE examining the "Shiobharat" from the point of view of the birth-date of Shivaji, we have said :—

"Mr. Divekar has tried to maintain on the basis of the religious decision of a meeting said to have been held at Rajapur in the Shaka year 1584 (1664 A. D.) that Kavindra Parmananda had attended it and infers therefrom that the poet was a contemporary of Shivaji. The date of this meeting seems to be doubtful, as at that time there was disturbance in all Shivaji's territories on account of Mughal invasion and, therefore, Gagabhatta, whose name is mentioned first amongst those who attended the meeting, could not have come down all the way from Benares, and attended it at Rajapur in the Konkan. To us, the date, 1674 A.D., seems to be more probable; for in that year, Gagabhatta was in the Deccan on account of the coronation ceremony of Shivaji and could have easily attended the meeting, the year being a year of peace in Shivaji's kingdom, and, especially, in the Rajapur part of the Konkan. Shivaji could then have been easily able to arrange for the safe journey of the religious leader who performed his coronation ceremony. We have therefore no definite evidence to maintain that Kavindra Parmananda lived at Shivaji's court from the very beginning of his career, and kept composing his book, as the events of Shivaji's life progressed, as Mr. Divekar has maintained on page 17 of his "Introduction" to the "Shiobharat." In support of our opinion we made reference to two letters (Nos. 117 and 118, Volume 31, 99-100) pub-

lished in the "Selections from the Peshwa Daftar," describing grants of a village to each of two sons of Poet Parmananda. Since the expression of the above opinion, we have come across most convincing evidence to show that the above meeting occurred in 1674 A.D., i.e., in the year of Shivaji's coronation. We discuss below the same in short.

First we should like to cite the introductory part of the Rajapur decision taken in a meeting of the learned men of the Deccan and of Benares. It runs thus :—

"अयं शिवाजीराजा राज्यं प्रशासत् स्वजनपदान् दिदृक्ष्या कदाचित् भटन् सद्यः प्रदेशवासिनः दयेनवीति प्रसिद्धान् नानाविधानि उपायनानि आदाय राजदिदृक्ष्या समागतान् एतान् कौंकणान् इष्ट्वा राजनिष्ठवासिनः सभ्यान् पण्डितान् एतद्देशीयभूधर्माधिकारिणश्च 'एषां कीर्तयः कीदृगाचारः' इति समपृच्छत् । तत्र सभायां स्थिताः पण्डिताः । गागाभट्टस्वतन्त्रो निगमागमवित्तमः ॥ सभायां शुश्रूभे राज्ञः सुधर्मायां यथा श्रुतः ॥ दीक्षितः शितिकण्ठश्च रघुनाथो बुधाधिपः ॥ कवीन्द्रः परमानन्दो महादेवश्च पण्डितः ॥ प्रभाकर उपाध्यायस्तथा श्रीरंगशास्त्रिणः । नृसिंहशास्त्रिणश्चाथ महद्विद्वत्भरोऽपि च । अयाचितमहादेवः पण्डिताग्र्यो विनायकः । सोमनाथो जगन्नाथो महद्विष्णुस्तथैव च ॥ भूगोपात्मभिषोऽनंतोपाध्यायः पण्डिताग्रणीः । शेषोपाख्यः महादेवः काशीस्थः पण्डिताः अमी ॥ कृष्णा गोदावरी भिष्ठाश्च बहवो बुधाः ॥ स्थिता नृपसभे तत्र तथेतद्देशवासिनः ॥ धर्माधिकारिणोऽन्यः धर्मशास्त्रार्थकोविदः ।

राजापुत्रान्ते तु धर्माधिकारिणो गुर्जरोपनावकः शिष्टा विद्यन्ते । एते धर्माधिकारिणः अष्टाधिकारिणश्च गळवल्ली करोऽनन्तः उपाध्यायश्च सर्वेभ्यो अन्ये च बहवः पण्डिताः

समागतः समाजं कृत्वा विविधान् ग्रन्थान् आलोक्य परस्परगतश्च एषां धर्मावलोक्य गागाभट्टभूतयः निर्णयं कृत्वा राजे न्यवेदयिषुः । ”

The first point that we have to remember is that Kavindra Parmanand is mentioned amongst the learned men of Kashi, and not among those residing either in Konkan or by the side of the Krishna or the Godavari rivers. Mr. Divekar has tried to explain away this point by saying that he must have gone to that place for the acquirement of knowledge as it was a seat of learning. He further says : “He has therefore composed an introduction to his book, in which he has shown himself reciting the Puranas to the Pandits of Kashi on the banks of the Ganges. Interpreting his introduction literally, we have to say that he read out his book to the pandits of Kashi and remained there for some time ; it was therefore that he came to be numbered among the Kashi pandits. Then, in Shaka 1586 (1664 A. D.) he came down to Rajapur as a pandit of Kashi. He then remained back this very side or might have gone back to Kashi * ” All this is mere imagination and no proof has been cited to corroborate it. On the other hand, absence of any reference to Kavindra Parmanand or his book in any other document, absence of any document conferring any grant upon the poet, and the definite mention of his name among the pandits of Kashi (who were especially invited for the coronation), shows beyond doubt that he was a permanent resident of Benares, and neither a temporary visitor as a student nor a temporary resident. In short, *his place of permanent residence was definitely Benares.*

* See Mr. Divekar's Introduction to the “Shio-nidhanat,” p. 15.

Now to the date of meeting of the learned men at Rajapur. We have to remember in this connection that Shivaji himself took the initiative to put a question, एषां को धर्मः कीदृ-गाचारः (What is their religious duty and what is their practice? at the instance of the Shenvis of Konkan to the learned men that were by him and that had come from the Krishna and Godavari sides and that belonged to the Rajapur province. Such an assembly of the learned men of the north and the south could not be possible on any occasion other than the coronation. It was only on this occasion that a large number of pandits (including Gagabhat came to Shivaji from Benares. They came some months before the coronation and the king took them round some parts of his kingdom before the coronation. In this connection the place of the meeting, Shivaji's presence, and the words स्वजनपदान् दिदृक्ष्या कदाचित् अटन् have to be well remembered. These last words clearly show that Shivaji took the pandits to Konkan with a view to show them some parts of his kingdom. Then the following references have also to be paid attention to:—(a) In the Jedhe-Shakavali there is this entry under Chaitra, Bright 13 (8th April 1674): “Reviewed the troops at Chiploon.” (b) In the “Shio-nidhan-shakavali” occurs this entry :

शके १५९६ आनंदनाम संवत्सरे चिपुळणी कटकचा अरगजा कसून बंद बंद केला सिद्धाच निरोप दिवला ॥

(In Shaka 1596 Anand Samvatsar (1674 A. D.) he bid farewell to the respected.” So, the review of the army at Chiploon was followed by bidding farewell to the respected (शिद्द). The respected persons seem to be those very persons who are referred to by the word शिद्द (respected) in the above quoted

decision, i.e., the religious heads of the Rajapur territory. Any one yet inclined to doubt the validity of our inference may refer to the “Patrasar-sangrah,” Vol. 2, documents 1632 and 1643. The former document is an extract from the “Factory Records, Surat, Vol. 88” and is dated the 22nd April 1674 ; the latter document is an extract from the “Original Correspondence,” vol. 35, and is dated the 13th May—13th June 1674. In the former there is reference to Shivaji's arrival at a day's distance from Kavar. In the latter there is mention of Shivaji's return from Chiploon to Raivi (Raigarh) in connection with the description of the coronation ceremony. It is thus clear that the said meeting was held some time in April or May 1674 A. D. This makes it clear that Kavindra Parmanand did not come to the Deccan

before April 1674 A. D. and belonged to Benares. Two and a half years after the coronation, Shivaji led an expedition into the Karnatic, which occupied about a year and a quarter, after which Shivaji returned to Raigarh. About two years thereafter he died. So Mr. Divekar's contention that Kavindra Parmanand was a court-poet of Shivaji and wrote his work as the life of the hero progressed is perfectly untenable. As we have already shown, he was a permanent resident of Benares and wrote his work very much after the death of Shivaji either at Tanjore or at Benares on the basis of the material collected at Tanjore, and that he certainly passed his last days at Benares. We have already shown that he must have died only a little before 1716 A. D.

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EXHIBITIONS.

BY MR. D. KRISHNAYYA,
Hindupur.

OPPORTUNITIES are rare and how to make most of them when they present themselves is a factor which every one ought to learn.

The wonderful universe in which we live with all its glory is perhaps a model exhibition and man with his wonderful mechanism, supreme sense and power of imagination and construction is again the right typical exhibit to point out the glory of the Creator.

To develop the latent faculties in man and to point out the work of the mind, the hand and the artistic skill, exhibitions are generally organised. The mind will be dull and the hands idle but for such exhibitions.

Exhibitions are of various kinds—educational, health, art, industrial, technical, scientific and a host of others but an educational exhibition ordinarily consists of fine arts, handi-crafts, book-section and a host of other sections and subjects. The importance of such educational exhibitions in the matter of the cultural development of the country cannot be over-estimated. In some form or other such exhibitions have come to play their supreme part from long past ages and are sure to have their right royal march for ages to come. To exhibit the skill of the Pandava princes in archery, a grand exhibition otherwise known as the tournament was held. The classic literature of any country has such examples and instances can be culled in plenty. In our own days, in our own country, on the lines of the past, the Dasara session is taken as the fine opportunity to hold a grand exhibition—say for instance the Mysore Dasara Exhibition.

In the school world, exhibition matches are held to point out the skill and capacity of tested players. Likewise educational exhibitions at provincial conferences are held to develop the latent faculties of the students, nay one and all, as everybody is a student from the cradle to the grave.

‘Learning is nothing but mirth’, is aptly applicable to exhibitions where the spectators with some care and wisdom can learn a lot by closely observing the exhibits and by trying to construct some such if they can. Again, ‘learning by doing,’ the well favoured maxim of the educational world—the teaching profession, has its full play here, for from the student down to the teacher all can learn something or do something or both. By the exercise of the muscles, and the brain the artistic sense develops and so it is by means of such opportunities as exhibitions and by availing oneself fully of such opportunities that faculties play their full part in life. Exhibitions serve to develop the creative sense and for those who can act and come up to expectation, these opportunities are really keys of success. Imagination runs in wonderful ways and brain works in a magnificent way and hands are the real tools of man and all these combined with patience and skill are really exhibited in any well organised exhibition. A supreme sense of gratitude to the architect of the wonderful universe pervades in solemn silence in any exhibition and exhibits are merely the noble offerings to the master potter—the Lord, in the words of Robert Browning.

SHAKESPEARE AND HIS MACBETH.

BY MR. D. P. RAO, *Lalitpur, (U. P.)*

IT is chiefly on the characters and their actions that the mainspring of the tragedy rests and that the various events of the tragedy are consummated. In the beginning of the play we see the three witches dancing on the heath, and uttering things which are to produce far-reaching and fatal results. There is Macbeth, the hero of the plot, who is driven as a straw in the current, by an inner urge to some of the excesses which facilitate an action. There is Lady Macbeth of iron will and strong purposes, who believes in striking iron when it is red-hot and prompts a deed without regard for its consequences. Too much of imagination on the one side, with a glimmer of conscience and rash action on the other side, is found sorely combined in the texture of the play. Leaving gracious Duncan, the protagonist of the play in whom our interest and attention are, of course, deposited, we have the whole of our attention and judgment centred round Macbeth and his wife, so that whatever comments, concessions, or censures, exaggerations or palliations we may have to make we do so in respect of these chief characters. Shakespeare has been particular in depicting them in such a manner as to excite both our pity and hatred at one and the same time. It is veritably the eclectic genius in Shakespeare's works that is commendable. Shakespeare knows perfectly well as to what to draw and how much to draw upon the chronicles of Holinshed or Plutarch's Lives of Martyrs or the like, for the raw materials of his play. But even when we are led to talk of the source in his plays and to acknowledge his indebtedness to this or to that, we can in no

way commit the fallacy of over-estimating his obligations. Even a mediocre writer or poet has some grain of originality to his credit and when this is true of little luminaries in the literary world, it must be true of Shakespeare who has been ranked as a ‘single star’ on the horizon of English poetry. History can provide only the dry bones or dross facts for manipulation or reflection and thereafter its function ends. But something more goes to the composition of the play than many critics imagine. Accordingly Shakespeare approaches Holinshed not as history but takes it as a mere stuff on which to work out his political genius. It is on this crude stuff that he builds a superstructure of grand design and proportions all his own with the best resources at his command. The subtle characterisation, condensed dramatic dialogue, the pointed soliloquies, the interlude, keen insight into the nature of man, power of arrangement, diction, etc., are all Shakespeare's own. Like Michael Angelo in whose hands marble was said to grow soft as silk, he could make the stuff after his own choice and mould it to a finished product, the masterpiece of poetry and design. This should always be considered whenever we attempt to determine the source of the plot. In fact who can bring out a sad and sore contrast of character between Othello and Desdemona, Emilia and Iago, Macbeth and Lady Macbeth? Who can bring about a shipwreck over the turbulent sea without the least possible harm done to the crew and the passengers? Who can paint Julius Cæsar with a firm and unshaking resolve, having the constancy of the fixed star in the heavens or the firm-set

earth? Who can reconcile the hateful nature of Oliver with the merciful and forgiving disposition of his brother Orlando? Who else can, as Verity has put it, "bring about Lear's madness, pudder of the elements and the babbling of the fool"? Thus after the study of a play of Shakespeare, the questions, how much did he draw and what did he draw from this or that melt down at once when we come across his intensity of thought and wonderful development of the plot with lessons of political and civil wisdom and reflections which will apply to all times and places. But even if it be alleged that Shakespeare drew upon Holinshed for the story of Macbeth, it would appear on comparison that the play is a deviation from Holinshed as regards the characters and actions. Holinshed's Macbeth has been depicted as a just and noble man at least in the beginning of his career. He is shown to have planned and perpetrated the crime of murder without any trace of hesitation and compunction. Besides this he acts with the complicity of his trusted friends including Banquo. Lady Macbeth is shown to have incited her husband to attempt the deed but is not an active partner. Banquo has been made an accomplice on some promised reward or honour. But in the play itself we find Macbeth under a great mental conflict of doubts and fears which hamper action. Lady Macbeth is not a sleeping partner in the business but an active figure, both the prompter and an actress herself, a potent and deadly living instrument without whose urging assistance, goading and scolding the deed could not have been done. Again, it is between the husband and the wife that the deadly transaction is confided. Noble Banquo stands clean and clear in his loyalty and allegiance to Duncan in spite

of Macbeth's attempt to entice him to the contemplated deed. It would appear that there is no common ground between Shakespeare and Holinshed. There is a tendency to talk of the source of the plot regarding Shakespeare's plays, but the aforesaid observations should at least serve as sufficient safeguards against the said harmful tendency of exaggerating his obligations to this historian or that. Let us now come to another point. The play of Macbeth seems akin to the Morality Plays of Greece where virtue and vice, good and evil were shown as embodiments in typical bold colours. Accordingly there runs a conscious and consistent dramatic purpose in the representation of two diametrically opposed characters—virtuous Duncan on the one side and vicious Macbeth on the other. We are made to see on the stage noble and gracious Duncan, King of Scotland, as endowed with a thousand virtues and sterling qualities of head and heart and possessed of a generous disposition by virtue of which even angels shall plead for him 'trumpet-tongued against the deep damnation of his taking off.' Duncan feels that in spite of the various honours having been lavishly conferred by him on Macbeth, the sin of ingratitude hangs on his shoulders.

We are further shown that as if those honours and presents were not sufficient, he sends a diamond to Lady Macbeth as a thanksgiving present even on the eve of the murder. We are enriched by the glorious royal sight. Nowhere has nobility been found to reign so supremely over the hearts of men! On the other side there stands Macbeth whose heart is burning like a furnace. He is in fact so overwhelmed and tortured with an over-vaulting ambition that he loses all his senses of propriety, justice

and gratitude. He stoops so low in the scale of humanity after slaying the very benefactor at whose hands he has already received liberal honours that as he stands with his bloody hands, even Neptune's ocean cannot wash them off, and that we cannot spare him our greatest censure. But Macbeth on the whole does not stand as the despair of mankind. He is never allowed to cease to be a human being. Shakespeare's sympathetic genius allows him the spark of conscience, the grain of wit and wisdom—some reasoning faculty to enable him to focus the deed with its accompanying result. There is a dramatic touch of pity and sympathy under the very folly and failure of Macbeth's character and the helpless circumstances under which that character is placed and high tragic action is brought about. From the very beginning of the play, Macbeth has been shown under the darkening influence of the three witches who tempt him with their fatal prophecies and make destructive ambition sit and develop in his breast. Nevertheless he listens to the supernatural solicitings with care and caution. His very hair is unfix'd. His heart begins to knock at his ribs. Conscience upbraids him and cries out 'halt' to his thought of murder. A deadly struggle in the mind ensues. He is tossed up and down in the conflict. He seems to have co-opted his wife, Lady Macbeth, whose steel frame character and unbending resolve is too strong for his weak will. The tables consequently turn against him. At last torn asunder by ambition he bends himself to the terrible business and finally does the deed.

Now this heinous crime, if it be considered without any regard to the circumstances, will look like the very breach in Nature and bring a thousand curses on the perpetrator and shall take away all our sympathy. But Shakespeare has taken a special care in the

painting of Macbeth's character. Doubtless he has brought out Duncan as crowned with all glowing royal virtue but when this is done he has been nice to Macbeth as well.

Macbeth has been shown as sandwiched between the witches, the instruments of darkness, and his wife who is a lady of action and stern purpose. To these forces may be added his own weak will and faulty imagination. Shakespeare with a view to bring about a high-wrought tragedy has had to darken Macbeth's character with the taint of ambition and the black instinct of self-preservation which in due course of time becomes a ruling passion for blood-shed. How often has Macbeth thought over the consequences of his act and looked into the life beyond life wherein actions are judged and punished accordingly! He wished to fall back at every moment he was incited to action. As it is, Shakespeare places Macbeth under a unique combination of circumstances which draw our sympathy and pity while his action is open to strict censure, wild reproach and severe condemnation.

As Shakespeare was the master of his art as a play-wright, and a skilled stage-craftsman, he knew thoroughly how to control the stage and satisfy the public tastes of the day. It may be borne in mind that for the most part he wrote his plays for the public theatre like the Globe. They were never meant for the Buckingham Palace or the Whitehall, the University or the Inns of Court. It is, therefore, but natural that he should have condescended to the wishes of the audience, but while he was keen in appealing to the imagination of the audience through the various ways, *i.e.*, foolery, witticism, irrelevant songs, tawdry shows, mirth and dancing, he sometimes exercised due caution in this direction. He would always see that the scenic and spectacular effect of the exhibition of a certain act was not

too severe or repugnant to sight. An appropriate instance of his reservation in this respect is met with in the play itself. Duncan's murder is not allowed to take place on the stage. It is only communicated to the audience through the dialogue between Macbeth and Lady Macbeth. Shakespeare at this place appeals to imagination rather than to sight. There is a justification too for this omission. Shakespeare, as we find, has already painted Duncan, in bright colours of virtue without the least taint of vice. He has shown him as most obliging and liberal in his attitude to Macbeth. Besides he is made the guest of the latter who invites him to dinner in his own castle. He has already enjoyed the 'pleasant and nimble' air of the castle and has had a fast sleep. Against this very king, Macbeth and Lady Macbeth have conspired. Both have been shown to have invoked evil spirits tending on mortal thoughts. Macbeth has been transfigured; the white milk of his kindness is contaminated with gall. Lady Macbeth too has been 'unsexed.' Hatred and terror have loomed over the impending tragic actions. The audience has by this time been terror-stricken. The tension of feeling has reached the highest pitch. In these circumstances the electrifying shock of thought and action has got to be softened. Moreover, regicide would have been too strong and repelling to human sight. Thus in the very interest of the dramatic art and the audience itself, it was essential that Shakespeare should have maintained a sort of reserved attitude so as not to have brought the terrible deed to be performed or shown on the stage, although he knew the ruling rage of the day that the more cruel the scene was the more the audience enjoyed the fun. Shakespeare, therefore disposed of the murder scene by the use of euphemism. "I have done the deed," says Macbeth to his wife, and the whole audience is taken aback by the report. It

must now sit in judgment over Macbeth's action with which Lady Macbeth too, has associated herself a great deal.

However, with the exception of Duncan's murder an exhibition of which on the stage would have been too inhuman, all other murders such as those of Banquo, Lady Macduff and her children do take place on the stage. Shakespeare wants to show that Macbeth has already crossed the Rubicon of crime and that his character hardens into deeper crimes. He shows further a state of utter savagery into which Macbeth has fallen and a precipitous ruin which his blood-thirsty conduct awaits.

Let us now touch upon what is called the Porter's scene or knocking at the gate in 'Macbeth' which follows the commission of the crime. Thomas de Quincey has thrown sufficient light on this. Much controversy has been raised over this scene. There are critics who question the insertion, and they have gone to the length of rejecting it, holding that the scene is not Shakespeare's. But there are good reasons to show that it is of Shakespearean stamp. Its purpose is twofold, *i.e.*, that of relaxing the tragic tension and that of showing a great contrast between the world of horror in which the action is passing and that of normal conditions, which follows. The scene affords some relief to the excited audience. Through the topical allusions and humorous remarks on the customs of the day, the mind of the audience is a bit relieved from the tragic tension. Such a mechanism is an usual thing in all tragedies, and Shakespeare only conforms to the tradition of the drama. But while there is a touch of wit and humour, some of the grim realities are shown to the audience. It is made to realize by means of the Porter's conversation that Macbeth's castle has erewhile long ceased to be a 'pleasant seat' but turned into a 'horrid hell' where stands 'none more condemned

than devilish Macbeth.' The audience is now to have a look into it. Macbeth stands transformed. The animal in man has entered into his heart, Lady Macbeth has been reduced to another witch. It is quite an abnormal world that has been created. But life is governed by opposites. Every action is followed by reaction. The moments of thick darkness that cover the human soul are short and brief. A knocking at the gate is naturally heard and Macbeth is roused again to a state of self-consciousness. He finds the crime glaring in his face. He is now filled with remorse. Human pulse begins to beat in his breast. Deeper concerns and higher interests in life are re-established to show that with a knocking at the gate the realities of life must have a claim. Shakespeare has very well brought out the two different worlds, apart from the skilful references that he makes, pointing to the date of the composition of the play.

Shakespeare is a mighty poet indeed. In the words of Thomas de Quincey, Shakespeare's works are not merely great works of art but are like the phenomena of nature

which have to be studied with a complete submission of our faculties. There is nothing too little or too much in his works. His design is complete and arrangement full. Similarly there are other scenes equally striking and horrible to make a darker one, a dark tragedy such as the Banquet scene, Lady Macbeth's walking scene during the night, Lady Macduff and her talk to her innocent children. All these possess highly artistic values and are full of great psychological interest. The whole tragedy thus is a tragedy of three-fold darkness, *i.e.*, a tragedy of the setting sun with a setting of thick fog over a dark and morbid soul. But Nemesis works her way as usual and accordingly Macbeth falls from the frying pan into the fire. Such is the fault of the hardened and self-seeking murderer who afterwards fights his enemies to bitterness as a life desperado. At last he is beheaded by Macduff. Lady Macbeth dies when her assistance is required most, Macbeth is finally shown a 'way to dusty death' which all ambition points to. The play is, therefore, a tragedy of ambition which Shakespeare and his 'Macbeth' show.

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JOHN WESLEY AND THE TWENTIETH CENTURY.

SOME THOUGHTS ON THE BICENTENARY OF THE 'CONVERSION'
OF THE GREAT FOUNDER OF METHODISM.

BY MR. T. P. AMARASINGHE,
Colombo, Ceylon.

TWO hundred years ago, to-day, in the silence of an Aldersgate Street religious meeting there took place one of the strangest occurrences that modern history has witnessed—the sudden change in the life of a single individual that ere long was to shake the foundations of three kingdoms, nay, even of the whole world. Up to the moment of that meeting on May 24, 1738, John Wesley had lived the life of an eighteenth century clergyman of the best type, with a perfectly sincere religion of a rather formal, ecclesiastical and intolerant kind. From that moment onwards he was the possessor of a warm passionate faith which was dynamic—the man who led the Evangelical Revival; the man whom the will that his transfigured life must influence all other lives had seized as in a vice. And it was well for England that it was so. For, there is testimony in abundance that the earlier half of the eighteenth century in which John Wesley "lived and moved and had his being" was a callous age. "Not only in Britain but in all the lands of Western civilization it was an age of materialism, an age of prose, an age of 'commonsense,' when men measured all human activities by their visible and tangible results and enthusiasm for spiritual or ideal ends was regarded as evidence of an unbalanced mind, because it allowed reason to be deflected by emotion." The religious zeal of the last two centuries had vanished and the humanitarian spirit of the next age had not begun to manifest itself. The critical spirit of the age resulted in a rapid spread of scepticism, which reflected all shades of religious belief in Britain and in

Europe. The higher clergy in the English Church were largely sceptical and consequently took their religious beliefs as anything but serious. The decay of fervour and the growth of scepticism were equally marked in the dissenting communities. Of the several aspects of this deadness the most unhappy was the complete neglect of the new class—the industrial poor which the fast changing economy of England was throwing up. The miners, weavers, sailors and dockyard workers crowded in the waterside slums of great ports were scarce given a thought to.

The cumulative effect of all this was the general feeling of insecurity which was spreading like a contagion. The slightest upheaval or rumour of upheaval was sufficient to create a panic. And eighteenth century England was far from free of upheaval. Wars and rumours of wars, earthquakes, deaths and desolations were rampant. London was shaken in 1750; and in 1756 with sea and waves roaring Lisbon was overthrown. Peace was a far cry with the Seven Years' War at its height. With the mismanagement of that war, ruin and destruction dangled over England. The whole presented a very menacing look indeed! Europe, and even the whole of Europe, was drifting headlong into chaos. Nothing short of a revolution, it was clear, could cleanse the springs of British national life and save her for the moral leadership of the world. The inevitable revolution did come bringing in its wake not bloodshed and deeds of atrocity, but the miracle of modern England. The explanation of the change of M. Elie Halévy, the distinguished French

scholar is to the point: "During the eighteenth century England had been the scene of a great religious movement, unparalleled on the continent—the last Protestant movement that has given birth to permanent institutions. This was the 'Methodist' or 'Evangelical' Revival. To this movement in combination on the one hand with the old Whig political traditions, on the other with the new ethos produced by the Industrial Revolution, British Liberalism of the opening nineteenth century owed its distinctive character. We shall witness Methodism bring under its influence, first the dissenting sects, then the establishment, finally secular opinion. We shall attempt here to find the key to the problem whose solution has hitherto escaped us. For, we shall explain with this movement the extraordinary stability which English society was destined to enjoy throughout a period of revolutions and crises, what we may term the miracle of Modern England, anarchist but orderly, practical and businesslike but religious and even pietist."

The world of our own day confronts just such a situation as the Wesleys, John and Charles, were called upon to face. We are to-day as much materialist, as much suspicious of enthusiasm for spiritual or ideal ends, as much callous of human worth and dignity as the men and women of mid-eighteenth century England. That we are sick unto death even the most superficial analysis of contemporary society needs must reveal. The foundations of society are crumbling before our very eyes. The grim spectre of unemployment with its twin corollary, poverty and starvation, now stalks all over the world threatening every home. Greed for wealth and the urge to amass it, come what may, have left us the dreadful spectacle of the few rich and the

many poor. The victorious march of Fascism has ushered in the reign of Force and Blood. Nations have grown so careless of human life that to their statesmen the one way to promote peace is by the piling up of destructive armaments for a second war to end war. And war of itself is no longer a profession, nor a protection of the helpless, but a plague without pity upon them.

At this moment when all seems lost and despair is taking hold of even the best men and women of our generation, May 24, 1938, the bicentenary of the Evangelical 'Conversion' of John Wesley holds out to us a challenge and an opportunity. The opportunity is to rediscover the vital message Wesley bequeathed to this and every age; and in that message to find the means wherewith we might be able to avert the doom that hangs over us all.

Perhaps the most unhappy characteristic of our day is the deplorable idea that is steadily gaining ground in secular as well as religious circles that in any and every thing it is the end and not the means that matters. This has given rise to the belief "that to be a murderer is no longer a disgrace if one can label it with a political badge; that to tear up agreements is an honourable act dictated by 'national pride'; that by proclaiming the 'defence of Christianity' one could invade foreign countries." At such a juncture could one deny that Wesley, to whom all things were to be brought to the bar of God and examined in the light of the Christian ethic, has not something remarkable to teach us? Half the troubles of our generation is the direct result of our divorcing morals from politics. The twentieth century has done more to enthrone Machiavelli than any other. Could we who have suffered thereby, who are daily, nay

hourly, witnessing the torture engendered by the tactics of a Hitler, a Mussolini or even a Salazar, have anything but respect and more than respect for Wesley, the stern denouncer of Machiavelli?

With the ever-mounting tide of Dictator rule and the consequent letting in of the reign of Force and Blood, Wesley Day has come though incidentally at an opportune moment. For to Wesley, Dictators were but devils incarnate. Peter the Great may have been a great soldier, statesman and general. But to Wesley: "Why was he ever called a Christian? What has Christianity to do either with deep dissimulation or savage cruelty?" Put Mussolini in the place of Peter the Great and you have Wesley speak to you on twentieth century issues. Hitler has done much for the material regeneration of Germany. To a country that was fleeced of her land at Versailles, he has added by sheer tenacity of purpose the Saar, the Rhineland and Austria. But listen to Wesley's denunciation of Frederick II—the Hitler of a past age: "Frederick may have gained Silesia for his country after long wars and endless suffering. We must not, however, regard only the material benefits of his reign, but the misery which his achievements cost, the hostility which they created in outside nations, and the military tradition they beget within his own." All things considered is this not the sanest, truest declaration that could be made of Germany to-day?

War to-day is not only a probability but a stern reality. John Wesley's whole life was one long crusade in the cause of Peace. Long before the actual commencement of the War of American Independence, Wesley strove might and main to establish peace and amity between the colonies and the mother-country. He felt and argued that the grievance of the colonists was a real one. So he

opposed vehemently the measures of Grenville and pleaded that the colonists had only asked for their rights in the mildest and most inoffensive manner that the case would allow. Further, he wrote several letters to preachers in America, urging them to use their influence for peace. One wonders how sternly he would have condemned the war-makers of our own day! And as for our statesmen to whom the promotion of peace means the piling up of destructive armaments, would they not have been anathema to the man who argued and proved that "not by might and power but 'by my spirit saith the Lord' can there spring up those forces of spiritual faith and reformation which alone can save humanity from a relapse into barbarism"?

Wesley lived in an age when the fast changing economy of England by the great mass of workless poor it threw up, made clear the ever-deepening gulf between rich and poor. To-day when the proletariat has grown to such menacing proportions, when unemployment is admittedly a problem unsolved, when thousands are dying of poverty and starvation, would it not be profitable to give a thought to the teachings and doings of the man Wesley whom Trevelyan claims to have "directed into other channels the first rebellion of the uncared-for millions, giving them other interests and ideals besides the material, fostering in them self-respect as citizens of another world whose franchise was not confined to the well-to-do, and providing them with a democratic, religious and educational organisation of their own." Wesley's great love for the poor is perhaps the most inspiring episode in his variegated life. It is displayed above all in his great contempt for the nobility. His journals are sprinkled with slighting references to high-born people. Reading these together with his references to the poor one

might think he were reading the writings of a Communist of the calibre of Lenin. As witness the following: "What is a Lord but a sinner born to die?" "To speak rough truth I do not desire intercourse with any persons of quality in England." "I have found some of the uneducated poor, who have the most exquisite taste and sentiment, and many, very many of the rich who have scarcely none at all. In most genteel religious persons there is such a mixture that I scarcely ever have confidence in them; but I love the poor, and in many of them find more pure genuine grace unmixed with folly and affectation." Still Wesley's affection for the poor even as Lenin's did not stop with mere protestations. In fact had he stopped with protestations alone, he might still have earned the regard of humanity. For, it is almost true to say that Wesley discovered the poor. This achieved, by his very example, he initiated England into the habit of alleviating their distress. Wesley cared for the sick and visited the prisons. He started prison missions, and more, the inspiration he afforded to men of the type of John Howard saw the movement for Prison Reform on foot. His all consuming love for suffering humanity led him to write his book, "Primitive Physic", which did a lot for the advance of medicine in his age. Not content with this he began the free distribution of medicine to the poor. It was to wipe out poverty, however, that Wesley directed his most strenuous efforts. The manner in which he gave all he had to charitable purposes has become proverbial. It is estimated that he gave away £ 30,000 in all. The two particular directions in which Wesley brought help to the poor of his day have a very modern ring about them. The first was the Benevolent or Strangers' Friend Societies which he created. The "Lending Stock," the forerunner of the modern State-aided

Bank, was the second. Much as statesmen in their efforts to grapple with the problem of poverty have followed along the lines Wesley marked out, could one desire more than that Wesley Day should serve as the occasion for mankind to renew and redouble their efforts on behalf of down-trodden humanity?

Greed for wealth and the urge to amass it, come what may, has reduced our present world to chaos. It has made unbridgeable the gulf between rich and poor, and brought revolution to our very doors. It has made possible the problem of poverty in the midst of plenty in the face of which it is almost true to say that economists know not what policy to recommend. For, some recommend large-scale 'spending' as the way out of chaos; others as eminent recommend 'saving'. It is therefore that one is inclined to think that Wesley's teaching on Wealth is of very peculiar import to our generation. "Earn all you can; save all you can; give all you can," was the continual cry of this Apostle of England. It is a policy which in respect to modern theories "is of neither side and yet of both." Would it not provide a way out of our present discontents?

Religion as taught by its more popular expositors has been shown to be more other-worldly than this-worldly. Hence in the crisis of our day mankind has quite rightly reserved their allegiance to movements that promise rewards here and now. With the ever-advancing tide of Fascist and Communist rule, religion has been set the task of harking back to the Christianity of Christ which is concerned as much with the temporal as the eternal. Now John Wesley stressed that religion has a very great concern for the temporal. Through him and his disciples he made it the friend of the prisoner, the champion of the oppressed and the liberator of the slave and by that means

saved England the horrors of a French Revolution. Will not Wesley Day, by focussing attention on this particular aspect of Wesley's teaching, serve to convince mankind that the way of Christ is the safest and surest way to sanity?

At a time when Hitler is thirsting for Aryan blood and Mussolini is claiming for the White races the task of holding in unwilling servitude their sun-kissed brothers, Wesley's successful agitations on behalf of the Negro slave, his momentous declarations "The world is my Parish" and "I am not the man to distinguish between my parishioners" are of special import to the modern world. And to us who live in lands where universal franchise is happily the rule the Bicentenary has a very special message indeed! The world to-day is witnessing perhaps the most important contest in all its varied history—the contest between Democracy and Fascism, the contest between government of the people, for the people, by the people and one-man rule. And the continuance of Democracy rests on the proper use of the vote by the ordinary man and woman. Wesley, though he lived in an

age far-removed from ours, in his 'Word to a Freeholder' outlines to us the best method of fighting the deadly virus of Dictator rule. He exhorts his preachers to denounce uncompromisingly every form of political corruption in election, to exhort the voter not even to accept entertainment or food, much less money, from a candidate, to vote for him whom they thought worthy, to speak no evil of the person they voted against, finally to take care their spirits were not sharpened against those who voted on the other side. Wesley ends his pamphlet with the remarkable call: "Act as if the whole election depended on your vote." Small wonder that political historians since Wesley's day record that Methodists are the most incorruptible voters in the realm. Such then is the message of Wesley and Methodism to us of the modern world. To the reinterpretation of that message, to the rediscovery and re-emphasis in modern life of the spiritual experience that made possible that message, and not for the glorification of John Wesley or the Methodist Church, the Bicentenary celebrations he'd throughout the world were directed

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THREE YEARS OF TELEVISION.

A GERMAN ACHIEVEMENT.

By HELMUT URBAN.

SCIENCE and romance are not separated by so great a gulf as is generally supposed, especially when science is able to produce something which had been considered a mere fanciful conjecture. The transmission of the human voice and of music to any desired distance has long been taken as a matter of course, and now comes the new scientific achievement known as television. A few years ago, television was looked upon as a fantastic theory and as the vagary of some theoretical dreamer. Of course, the ability to see persons and objects miles away is not as yet perfected so as to turn the world into a fairyland of magic, for the radio science of to-day only enables the seeing of such persons and objects as are physically present at the place where the television instrument is operating.

If a television chart were to be made at this time, it would be similar in many respects to a radio chart of the year 1923. At that time, there were only eighteen radio broadcasting stations in the whole of Europe. During the next five years this number was increased ten-fold. Germany is the first country in the world which has developed and perfected a television system for its own use. For the time being, this system includes only a limited number of sending and receiving stations. The attempt to extend the system to all parts of the Reich has hitherto failed on account of the fact that the ultra-short waves which have to be used in television instruments are not more powerful than the average range of vision of the human eye, so that television

cannot be operated at great distances. The Berlin television system, for example, does not attempt to extend beyond the limits of the city, or, in other words, the television senders do not transmit to a greater distance than could be discernible with the naked eye. In order to furnish the entire Reich with television service, it would be necessary to construct and maintain more television sending stations throughout the country than the existing number of radio broadcasting stations. This would be entirely impracticable both on account of the expense and also because of the limited range of these television waves. The so-called short waves are furthermore almost wholly absorbed by the radio transmissions as they now exist. For this reason, experiments were made in the effort to transmit television pictures by subterranean or submarine cable, and it has been possible to operate television in this way between Berlin and the distant cities of Leipzig, Nuremberg and Munich. The science of television transmission was advanced still further in Germany, when two new sending-stations were built on the summit of the "Brocken," one of the peaks in the Harz Mountains, with an altitude of 1142 metres, and on the Feldberg in Southern Germany in the Taunus Mountains. It is considered that at these high altitudes—both about 1000 metres,—the television waves will have uninterrupted play for at least 100 kilometres in every direction.

Technically, the television instruments are still in a transition stage, but at least the

science has begun to emerge from oblivion, in the sense that those who take part in presenting television pictures will have something stronger in the way of light than the rays of the moon. Television pictures, up to this time divided into 180 photographic lines, will now have 441 lines, and by the use of the "iconoscope," it will be possible to replace the former broadcasting "dark room" with a studio brightly lighted. Large television apparatus are to be installed by the German Post Office for the televisual transmission of theatrical performances, which will be reproduced by television in a big open-air theatre in Western Berlin.

As to the evening programmes of Berlin's first long-distance television service, the Superintendent, Hans Juergen Nierentz, has done much to add to the variety of the picture news given, without in any way interfering with the regularly established radio or cinema news service. Television will take its place eventually alongside the radio and the moving picture, its chief function being to broadcast the latest news as quickly and as accurately as possible in pictorial form. Mussolini's recent visit to Germany is no doubt still fresh in the public memory. At that time, the cinema theatres of Berlin were not able to show films of the Duce's arrival on the same evening, but television accomplished this feat. For events of this kind, a television "troop" is to be organized, similar in character to the film weekly news reporters. Although television receiving instruments for private homes are not yet on the market, the German radio and television experts are working on a model from which such private television receiving instruments can be manufactured, though it will no doubt be some time before a popular-priced apparatus of this kind will appear.

In its pioneer work in the field of television, Germany is seeking to add to the

enjoyment of home life, when the outside world can not only be heard over the air, but can also be seen by means of the waves of television. There is no gainsaying the fact that when hearing of events going on in distant lands, it is much more interesting when one can see these events as well. Anyone who has the opportunity of seeing television pictures ought not to forget that ten years ago the whole question of transmitting pictures by electricity or over air waves was thought to be fantastic, and should therefore be inclined to overlook the small technical defects which still exist, such as the vibrating of the picture, etc. The science of television, as it is now being developed in Germany, will soon have cut its eye-teeth, and be on the way to maturity. It is far from being improbable that in the course of another ten years, it will be possible for one to see what is going on all over the world, just as we now hear what is going on, by merely pressing an electric button.

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STUDENTS AND POLITICS.

BY MR. GOPAL NANDAN SINHA,
Kharanti.

IT is highly sentimental to think that a student is to keep himself away from all the politics of the world. It is rather an idea which should be very akin to the general movement of a student.

A student is a student of all the arts and sciences even though he is a student of arts or science in their individual aspects.

Politics is an outcome of the general natural movement of the world. There are town-polity and village polity—provincial polity and imperial polity—and then there are imperial polity and world polity which govern all the powers of the world.

Politics has its origin in the students' world. The world of politics is co-extensive with that of the students. The term politics is a very wide one and the word student is all the wider. As such there would be no sin to semblise students with politics.

With whatever explanation, one has to come to the final conclusion that students are the creators of politics. The first stage of politics of any type begins with a student.

A student of nature gives the best expression of nature polity which evolves in the outer world at the hands of the people in general who come forth to support nature-polity.

Any capable man of spirits would never revolt against the facing of natural phenomena. There are regular conflicts among different natural phenomena. There is a politics of their own.

To the minds of people in general, it would appeal most, that the same tree imparts shade to its cutter who ignorantly does not stand away from the branch he is cutting; and the moment the branch comes down, the cutter is also hurled down and learns a substantial lesson without any direct resistance on the part of the tree. This is in itself a great politics to infuse in the brains of students, a polity of extensive application in the world—singly paid; doubly repaid. Even the cautious cutter of the tree who is constantly under its shade becomes devoid of the shade when it is cut prostrate and he is exposed to the rays of the sun without any other source of shade. Here the existence or non-existence of the cutter and the tree is interdependent: The tree fell down because the cutter exercised his will. Had there been no tree, the cutter could not have exercised his will upon the object he was in search of. Then again after the tree was cut down, the shade which the tree was imparting was off and the existence of the tree was lost for good. Suppose for instance the whole of that tree would be insufficient to serve the purpose of the cutter, his purpose then would be ever unfinished until he cuts down another tree, eventually decreasing the number of trees under his possession to nil so as to find himself lost at length. Such sort of loss would never arise, had the cutter taken a considerate action in cutting the tree.

He could have cut down branches only until his purpose was satisfied.

There is a deep politics in the above. This gives rise to the significance of the relation

between the ruler and the ruled, master and servant, wife and husband, brother and sister, father and son, and so on.

The existence of the one is correlative to that of the other.

This is the verdict of a student, the writer, that the great polity of forbearance and the polity of the great maxim "slow but steady wins the race," are tackling many of the most delicate situations in political crises of the great empire of the day.

The idea above originates out of one observance in nature-polity. It would be difficult to deal with and expound each and every notice of the observer.

A student of religion would face many other queer sorts of religious polity.

The politics of religion is one with preference to be imagined than spoken of.

The great spiritualists of different faiths fight for their own predominance. The policy they adopt is of the antiquarian type.

Great religionists stick to one particular principle. Their spirits are undaunted even if they face the greatest difficulties and barriers to the advancement of their faith. They are never shaken by the pin-pricks of their antagonists.

The great politics of religion is the unshaken faith of the propagators and expounders having their strong brain moulded in the very character of their particular religion. This sometimes gives rise to conflict between different religions and a narrow creek running from out of these is the most important system of conversion. This system of conversion may at first sight seem to be a plaything to others. But how it slowly helps towards their increase and development is

simply inconceivable. Every drop fills up the tank.

A student of religion may take religion easy but the steady progress would automatically give rise to the religious polity to which a student remains unfamiliar but his eventual study enlightens him. This shows that the student's career is interwoven with the commencement and course of religion.

It must be borne in mind that every spiritualist is a student of religion.

Trade politics is one with a good mind to be perceived. One cannot carry on a successful trade unless for one's knowledge of trade polity. Advantages derived by a trader having no knowledge of trade-polity are few and far between. The trader has to face many odds and ends. Besides, the keen competition amongst his fellow-traders keeps him always on tip toe. This shows that the trader is a student every moment.

It is not arrogant to rank society politics as the one having developed into the great politics of the world.

It may be taken to count the student-world separately to that of politics to-day, but the great politicians were students yesterday.

At any and every moment one has to come to the conclusion that students are the chief beings of to-day who take up politics to-morrow. It will be admitted on all hands that students are the basic support of politics. The activities of politics would utterly fail in case the students fold their hands off politics. The future citizens of the world are students. Their importance is very great. The status of a student is so exalted and valuable that it has to be preserved and paid heed to in all cases. It is for this that great politicians of the world lay great importance on the stu-

dents. They first of all tend to create such feelings as would make them politicians.

No doubt the present political crisis in Spain was the outgrowth of the activities of great leaders, but this would have come to an end had the students not come forward to support the great cause and General Franco must owe a great deal to students.

There is of course no aspect in the world which does not begin with students. Students are the future hopes of a country and one cannot ignore them in the world of politics. Great political leaders take up the cause of the country to-day, but who comes forward to take up the cause to-morrow?—It is the students who advance with their heads filled with massive ideas to justify their illustrious predecessors. Death of one would not stop the course of action. The action will surely continue at the hands of the others who continue to succeed. A predecessor must have a successor. This is the law of the world. An action being carried on by one must be taken up by another after the one ceases to be, for, without such a successive continuance of action, the universe would cease to exist.

Why then not train the students to become so strong-minded as to tackle the great politics of the day with the best of their ability? The politics may demand a greater amount of merit every day, for which they have to cultivate, exert and work up their brains from the very beginning.

There must be a very strong idea among students that they are political beings and in case they slacken their speed of spirit towards politics, the whole world of politics would suffer a great hollowness. Students who are members of the temple of learning of different nature are as good members of the temple of politics. They are priests before

the idol of polity. Their co-operation would be like salt in the curry which without it would be tasteless and very undesirable to eat.

For the well-being of every political society students must have their predominance inasmuch as their co-operation would display a greater amount of zeal and courage in the movements of politics. Their youthful and undaunted spirit, their undeterred courage and unfailing assiduity will help a great deal and will prove fit for the needs of political societies.

Students should not think themselves detached from politics. They, the pillars of the great cause, will always be associated in the list of the patriots of the country. The only valuable help which the great politicians of the world would expect will be at the hands of the students, for the students of to-day are the citizens of to-morrow.

A student is homogeneous to all the aspects contained in every phase of his study. His studies if intelligently directed towards literature may equally be employed towards politics.

As a matter of fact literature is whole and sole politics. But politics in literature is sub-conscious which when studied deeply shows forth. It has been noticed that great politicians are generally great authors and great authors are generally great politicians. If the great Mahatma Gandhi is a writer, Rabindra Nath Tagore is a politician. Similarly if Ramsay Macdonald was a writer, Mr. Shaw is a politician.

A student of literature is in the automatic course floundering into the vast ocean of politics and at the same time his sub-conscious soul takes literature only in its bareness and nakedness whereas his soul if cultured and well evolved would realise literature and politics deeply intermixed.

TOWARDS BETTER EDUCATION.

INDIA GOVERNMENT'S EFFORTS AND SUGGESTIONS TO PROVINCES.

SUGGESTIONS for the better control of primary education in India and its proper administration made by the Vernacular Education Committee which were lately considered by the Central Advisory Board of Education have now been circulated to all provincial governments and administrations by the Government of India.

The Government of India are anxious that the recommendations of the Committee should receive early attention from provincial governments and have requested them to furnish their views at an early date on the recommendations made by this Committee and also on the action they propose to take.

The Board, at its second annual meeting held in December 1936, decided to refer the question of primary education to its Vernacular Education Committee, to which were co-opted persons possessing experience in the administration of primary education. It met in Simla in September 1937 and presented its report to the Board on January 28, 1938.

Attention is drawn in the Report to the fact that there is sufficient evidence to show that generally the administration of vernacular education in India is lax in many ways. To improve administration, the Committee recommended that a Board of Vernacular Education consisting of not more than seven members of whom at least one should be a woman, with the Minister of Education as Chairman, should be constituted in each province, that the members of this Board should be appointed by the Ministry, that all pro-

blems concerning the expansion, control and administration of vernacular education and the financial aspect of these questions should come within the purview of this Board, and that the Board should have no statutory powers but act in an advisory capacity.

A BOARD FOR EACH PROVINCE.

This recommendation to constitute a Board of Vernacular Education in each province was approved by the Central Advisory Board of Education, but there was a difference of opinion in regard to functions and constitution. On the one hand, it was felt that the influence of such a Board without statutory powers might not be sufficiently effective; on the other hand, it was held that the influence of a Board consisting of representatives of a variety of interests and outlook would strengthen the hands of the Minister. After carefully considering the matter the Board agreed on the desirability of instituting a Board of Vernacular Education in each province, but preferred to leave the functions and the constitution to each individual province.

In most provinces, under Local or Self-Government or similar Acts, District Boards or other statutory bodies exercise almost full control over vernacular education in their respective areas.

These Acts have removed from the provincial governments and their officers many powers which they formerly exercised. The report of the Sub-Committee observes that there is little evidence to show that local bodies generally are developing a higher sense of civic responsibility in educational administration. Whilst the delegation of all powers

in regard to educational affairs by the local body to the Government Inspector may not receive general acceptance, yet the Committee felt that an improved Government inspectorate with wide powers of control would improve the administration of primary education.

The Committee in its report accordingly recommended that the inspectorate should be appointed by Government, that every District Inspector should be a member of the Provincial Service, that unless a special administrative officer were appointed, the Inspector should act as the administrative officer of the local body in all matters affecting vernacular education, and that all questions of transfer, appointment, dismissal and increments should be decided by him in consultation with the Divisional Inspector in the case of Anglo-vernacular teachers, the District Inspectress having the same powers in all matters concerning women teachers.

In addition, the Committee recommended the appointment at headquarters of a senior officer whose duties should be wholly connected with the administration of primary education and who should also act as Secretary of the proposed Board of Vernacular Education.

INITIATIVE WITH THE PROVINCES.

These recommendations were carefully considered by the Central Advisory Board. While there was not unanimity in regard to the removal of certain powers from the local body to the Inspector or to an administrative officer, the majority of the members of the Board were strongly in favour of removing such executive matters as the appointment and transfer of teachers from the local body to the Inspector. A small minority, whilst

admitting the laxity of local body administration, preferred not to hand over these powers but to attempt to improve the present system. After long discussion, the Board decided that a copy of the Report of this Committee should be forwarded to the provincial governments for consideration and such action as they might consider necessary.

The Report of the Women's Education Committee of the Board on the curriculum of girls' primary schools in India was also considered by the Board at its meeting on January 28, 1938.

Important recommendations made in the report are that the curriculum should be expressed in terms of activities, that in the primary classes the general curriculum for boys and girls need not be different and that co-education up to the age of about ten is not objectionable. There was general agreement at the meeting of the Board on these recommendations, and also on the need of efficient teachers, competent inspection and abundant handwork material for the satisfactory teaching of any curriculum for primary schools.

An important subject considered by the Special Committee was the inclusion of religious instruction in the curriculum of primary schools. While opinion was not unanimous in the Committee on this question, there was agreement that an education divorced from religion was sterile and that primary education without teaching the basic principles common to all religions was incomplete. The Board generally agreeing with this opinion preferred on account of the difficulties and the contentious nature of the subject to make no specific recommendation. Also on the recommendation made in the report that a common language was desirable for India, the Board decided not to express any view,

After considering the various recommendations made by its Women's Education Committee on the curriculum of girls' primary schools in India, the Board decided that a copy of this report should also be forwarded to the provincial governments for consideration and such action as they might consider necessary.

VOCATIONAL EDUCATION.

A subject of considerable importance which engaged the attention of the Board was the Report on Vocational Education in India by Mr. A. Abbott, C. B. E., formerly Chief Inspector of Technical Schools, Board of Education, England, with a section on General Education and Administration by Mr. S. H. Wood, M. C., Director of Intelligence, Board of Education, England, copies of which have already been forwarded to provincial governments.

Mr. Abbott, who was present at the meeting, explained more precisely the meaning and function of the industrial survey and agreed that the intention was accurately stated in his summary of recommendations, *viz.*, that every province should make a survey of the educational needs of its industries and commerce. It was agreed that the figures of the number in employment in different grades in various industries, particularly the power industries, would give the information required and could, without difficulty, be obtained to a reasonable degree of accuracy.

The danger of creating unemployment of another kind by developing technical schools to such an extent that occupations could not absorb the products of the schools was also pointed out and for this reason the need of a survey was considered to be all the more urgent.

The Board considered that an estimation of the demand of educated labour of each industry or group of industries would be sufficient. The Government of India have now brought this suggestion to the notice of provincial governments when any re-organisation of their school system is under consideration.

The Board felt that a further examination of the Wardha Education Scheme was desirable. It therefore appointed a Special Sub-Committee with powers to co-opt, to examine the scheme of educational reconstruction incorporated in the Wardha Scheme in the light of the Wood-Abbott Report and other relevant documents, *e.g.*, the reports of committees appointed by certain provincial governments, and to make recommendations. It is proposed to call a meeting of this Sub Committee in Simla during the summer.

INTELLECTUAL CO-OPERATION.

Among other subjects considered at the meeting of the Board was the formation of a National Committee on Intellectual Co-operation in India.

The Government of India for some time previously had considered the question of the relations between India and the organisation of the League of Nations for Intellectual Co-operation, especially with reference to the creation of a National Committee on Intellectual Co-operation in India. As it was considered desirable that, pending a decision on the question of the formation of such a committee, India should co-operate in the work of intellectual co-operation of the League of Nations as far as possible, the Educational Commissioner with the Government of India was appointed Correspondent with the Secretariat of the International Committee of the

League on Intellectual Co-operation and with the Director of the International Institute of Intellectual Co-operation, Paris.

Subsequently, the Inter-University Board, India, undertook the function of a National Committee on Intellectual Co-operation in India so far as questions of higher education were concerned. As the present arrangements are working satisfactorily, the Central Advisory Board of Education recommended that these arrangements should continue. The Government of India have intimated the provinces of the acceptance of this recommendation.

In 1935 the Board passed a series of important resolutions regarding educational reconstruction in India.

The Government of India were naturally anxious that these recommendations should receive early and sympathetic attention from provincial governments, primarily because of the recognised and pressing need for dealing urgently with the problems to which those recommendations related.

They accordingly forwarded copies of the resolutions to provincial governments for consideration. A summary of the reports received from the provincial governments on the action taken or proposed to be taken on these resolutions was placed before the Board which noted with satisfaction that practically every province was alive to the need of reconstruction and that several were considering the possibility of reconstruction on the lines approximating to those suggested by the Board.

The Board also noted with satisfaction that the provincial governments were generally implementing the recommendations made in the Report of its Women's Education Com-

mittee on the primary education of girls in India.

RESOLUTIONS PASSED.

The following were amongst the resolutions passed by the Board :—

A copy of the Report of the Vernacular Education Committee of the Central Advisory Board of Education on the administration and control of primary education in India, together with a summary of the discussion of the Board, should be forwarded to the provincial governments for consideration and such action as they may consider necessary.

A copy of the Report of the Women's Education Committee of the Central Advisory Board of Education on the curriculum of girls' primary schools in India, together with a summary of the discussion of the Board, should also be forwarded to the provincial governments for consideration and such action as they may consider necessary.

THE WARDHA EDUCATION SCHEME.

A Committee consisting of the following members, with powers to co-opt, should be appointed to examine the scheme of educational reconstruction incorporated in the Wardha Scheme in the light of the Wood-Abbott Report and other relevant documents, *e.g.*, the reports of committees appointed by certain provincial governments, and to make recommendations :—

The Hon'ble Mr. B. G. Kher, Premier and Education Minister, Bombay, Chairman; The Hon'ble Dr. Syed Mahmood, Minister of Education, Bihar; The Hon'ble Pandit R. S. Shukha, Minister for Education, Central Provinces; Lady Grigg; Rajkumari Amrit Kaur; Dr. Sir Zia-ud-Din Ahmad, M. L. A., Vice-Chancellor, Aligarh Muslim University;

Mr. J. E. Parkinson, Educational Commissioner with the Government of India; Mr. R. M. Statham, C. I. E., Director of Public Instruction, Madras; Mr. W. H. F. Armstrong, Director of Public Instruction, Punjab; Mr. Syamaprasad Mookerjee, Vice-Chancellor, Calcutta University; Dr. Zakir Husain, Principal, Jamia Millia Islamia, Delhi, Khan Fazal Mohammad Khan, Commissioner and Secretary to His Exalted Highness the Nizam's Government, Department of Technical and Vocational Education.

As the present arrangements whereby the Educational Commissioner with the Government of India acts as Correspondent with the Secretariat of the International Committee of

the League of Nations on Intellectual Co-operation and with the Director of the International Institute of Intellectual Co-operation at Paris, whilst the Inter-University Board, India, functions as a National Committee on Intellectual Co-operation in India so far as questions of higher education are concerned, have worked and are working satisfactorily, these arrangements should continue.

The Central Advisory Board of Education should function as a National Centre of Educational Information in India.

—From the *Bulletin of the Bureau of Public Information of the Government of India*, dated 15th June 1938.

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REVIEWS AND NOTICES

A POETRY SPEAKING ANTHOLOGY—CHOSEN AND EDITED BY HILDA ADAMS AND ANNE CROASDELL.

BOOK I—INFANT WORK.—1s. 4d.

BOOK II—JUNIOR WORK.—1s. 6d.

BOOK III—SENIOR WORK.—2s. 3d.
METHUEN & CO., LTD.

This anthology supplies suitable poetic passages for poetry speaking in accordance with the scheme evolved by Miss Marjorie Gullivan (one of whose books on poetry speaking we had occasion to review in these columns some time ago). The value of poetry speaking (in all its different aspects like Refrain work, Dialogues, Group work, Ballad-acting, Unison work) has not received sufficient recognition in Indian schools. The Recitation Hour in many of our educational institutions bores the teacher and the pupil alike, since little else is done except the mechanized repetition of the same piece by pupil after pupil.

The books under review provide graded poems for English children. The Indian teacher who has had training on the lines suggested by Miss Gullivan's scheme would not find it difficult to adapt some of these poems for Indian needs. Unfortunately, however, the teacher in India lacks the requisite training. Community-singing, group-acting and sequence-work are not at all foreign to the genius of India, the land of folk-songs and folk-dances. It only remains for us to train up the teacher of English in the speaking of English poetry in order that he may, by his example and enthusiasm, arouse the interest of his young pupils and make the 'Poetry Speaking Hour' something to which they would look forward with pleasure. Conducted on proper lines, poetry speaking is bound to help forward literary appreciation and the healthy and harmonious growth of the imaginative faculties of the child.

SIMPLE ESSAYS FOR YOUNG STUDENTS OF ENGLISH. BY LLEWELYN TIPPING.
MACMILLAN & CO., LTD. Price 8 as.

The book contains fifty-two essays on a wide variety of topics, with marginal headings for the paragraphs of each essay. The language used is easy and chaste. The study of these essays would not only enable the pupils to arrange their ideas and mark off the sub-topics but would also encourage them to collect for themselves facts on subjects not dealt with in this book.

PRACTICAL ENGLISH GRAMMAR FOR INDIA—BY F. G. FRENCH.

BOOK I—THE PARTS OF SPEECH IN GRAMMAR AND IN COMPOSITION—Price 8 as.

BOOK II—THE DIFFERENT KINDS OF WORDS AND THEIR DIFFERENT USES IN SENTENCES.—Price 10 as.

OXFORD UNIVERSITY PRESS.

This is a good *practical* English grammar for beginners in which the uses of the parts of speech are explained through a process of gradual deduction from suitable illustrative examples. Each lesson deals with one aspect or function of the part of speech, and the pupil is led gradually through instances to arrive at the rule involved. The elements of grammar thus emerge from simple lessons on construction and idiomatic usage. The exercises and the tests are original and interesting. The 'appeal to the eye' conveyed by the spacing of the paragraphs and by the graphic aids used in the typography considerably reinforces the practicality of these books.

STYLE IN ENGLISH COMPOSITION—BY DUDLEY BATEMAN, B.A.—MACMILLAN & CO., LTD.—Price 2s. 6d.

This book, written on original lines, aims at leading the student of English to cultivate a

style free from errors arising from loose thinking or from insufficient attention to the rules of prose art. In Part I the common faults of spoken and written English are illustrated through a series of exercises, grouped together under particular headings; and in Part II the exercises and the instructions help the student to form for himself a style which is at once clear, correct and effective. The classification of topics in this Part is original; the chapter on clearness discusses Direct and Indirect Speech, Paraphrase, Epitomization and Enlargement of Stories; Similes, Extended Onomatopoeia, Impressionism, Johnsonese Latin, Exaggeration and Endings are put together in a chapter entitled Elaborations; the Catalogue Style, the Wandering Style, Personification and Imaginary Dialogue are placed together in the next chapter which bears the title Essay Methods; this is followed by another chapter entitled Public Occasions, in which Tactful Letters, Speeches and Imaginary Broadcasts are dealt with.

The originality of the treatment, the novelty of some of the topics, the suggestiveness of the instructions and the emphasis laid on the exercises are all features which would readily commend themselves to teachers of English.

The chapters on colloquialisms have a special value for English pupils. The author has collected together here vague and slack expressions, hackneyed words ("get", "go", "do"), slangy words, "hanging" prepositions and clichés.

The present reviewer would demur to the author's disapproval of two or three colloquialisms which possess a directness of their own, that cannot be replaced by "dignified" words: "to have a drink" (which has certainly received

the sanction of literary usage), "to go mad", "second-hand books were going for three pence each at the sale."

It may be stated here that the Indian student of English, ignorant of the English colloquial, scarcely commits the mistakes pointed out in these chapters of the book. On the other hand, he either tends to be far too literary and showy, or imports vernacularisms into his English style.

Though the book is designed for English schools, Indian teachers of English could derive from it many a useful suggestion for the effective teaching of English composition.

FRENCH VERSE FOR SCHOOLS WITH VOCABULARY AND EXERCISES—By F. W. J. SAUNDERS. MACMILLAN & CO., LTD.
Price 1s. 6d.

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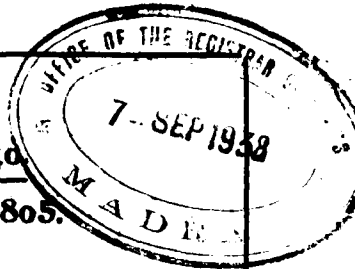
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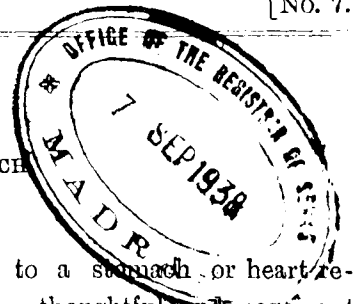
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JULY 1938.

[No. 7.]

THE CHALICE.

BY H. E. PROF. NICHOLAS DE ROERICH
Naggar.



As depicted by all peoples, the chalice is a highly symbolical object. Beginning with sacred, tribal, and martial cups, and ending up with the symbolic designations of nerve-centres, all are accorded especially careful attention. To the concept of the chalice are devoted untiring researches. In images, from the most ancient ones, we see flaming chalices. On stone sculptures in Central Asia can be seen how these guardians of the desert clasp to their hearts the chalice bearing living fire.

Thus in ancient depiction the concepts of chalice and fire are especially often combined. If we recall the most ancient knowledge about the chalice as a nerve-centre, serving as a repository of all perceptions, then all similar comparisons are still more profoundly deepened. The chalice, as a centre which had certain other names in ancient writings, nevertheless has been nowhere overlooked.

Even the most inexperienced people at times sense this important centre. They speak about some sort of constriction in their chest. Such a manifestation is commonly

attributed either to a stomach or heart reaction. But more thoughtful and cognizant people reflect that it is not from such causes which call up this tension which can even be oppressive. Sometimes it is possible to make a study of this curious manifestation. Such sensations may coincide with a very important psychic reconstruction of the organism. Especially can this be felt when a man is already capable of advancing in psychic development to a considerable extent, and yet voluntarily or involuntarily he unconformably neglects this possibility.

Likewise people sometimes call this condition anguish or grief, adding considerations about some causeless pangs. It is true that this tension is very similar to certain manifestations of anguish. Some have even said that their hearts can ache on account of something not perceived by them. Such sensations demonstrate once again how carefully and attentively one should refer to the signs transmitted by the organism itself. Without superstition, without prejudices and ignorant terrors, man must clearly take into account what is the most useful thing he can

achieve, and precisely how he can more indeferrably take advantage of each given circumstance. Of course there is often bestowed upon people the fullest possibility of acquiring a new step of knowledge. They notice momentarily flashing signs which attract their attention. They sense unexpected aromas, they may even hear something, but an imposed coarseness prevents them from reflecting clearly and distinctly what beneficent possibilities are so near to them.

We speak about a coarsening, because usually all possibilities are concomitant with refinement previously or currently acquired. But only grossness, the consequence of some impeding circumstances, conceals as it were the possibility of the closest realization of beautiful signs, and the responsibility which goes along with them. Very often people refer much more carefully to far-off possibilities of theirs, but when they may even find themselves quite near to certain sources, they begin to dream about some distant seas, evading the most proximate possibility given to them.

But the heart and the centre so closely connected with it, the chalice, knock for attention and grievously remind about what is most essential of all. These tensed warnings beat to the point of illness, but instead of harkening to them, man tries to numb them by some grossly absurd means. Surely sometimes this senseless person will look around, examine, and see that instead of petty everyday matters he could be in contact with the great and the irreplaceable.

Lest he try to justify himself either by age or by intention to do better in the future, it still remains that each instant is non-recurrent. Future intentions can create a multitude of

new possibilities, but this will be something else, and the former task will remain unfulfilled. Meanwhile each dereliction, and the more so those concerned with questions of the spirit, will sooner or later make itself known. In the chalice are deposited these unfulfilled or mutilated tasks.

Looking over the history of humanity from the standpoint of given tasks and the results received, it is always possible to convince oneself of the fact that lost spiritual possibilities will always remind about themselves as holes in the road. And again, it is impossible to refer all these vital circumstances to something exclusively great, according to the popular worldly standards. Sometimes the smallest seed outweighs lumps of gold.

Sooner or later people have to return to the spiritual path. Light-minded butterflies cannot always frolic on the flowing lawns, they have to turn to something else which lies in the foundation. When, then, people, willingly or unwillingly, consciously or unconsciously, in their own time or by contacts with others, return to the path of the spirit, the more clearly will the heart beat about everything formerly wrongly concealed, about everything unfulfilled, perverted, and left in neglect.

Any conventional terrors, any degenerate usages,—all this rises up in a ripple of the substance of the chalice, and people again toss out into space the poignant question, "why?" But for all that, each moment it is still not too late to do something in the way of reparation and improvement. Yes, this will be something else, it is not so clearly joined with the Higher Thought. Never

theless it is always possible to return into the right direction.

The centre, the chalice, manifest as the true secret of memory, preserves for ever the composed treasures and misfortunes. In life, in storminess, in turbulence, are these spiritual sediments reworked. Many wounds are healed, but still the scars remain, either within or without. Therefore so often do the chalice and the heart itself remind about themselves. People must try to direct thought along the right channel in order not to lose what is already lying at the threshold. As sentinels on guard the heart and the chalice remind one that one must not put off until tomorrow anything which can be undertaken today, nor must any luminous perception be soiled by some small dark consideration.

It is not well to spoil another's holiday. Just as precisely is it inadmissible to becloud a luminous perception. What small dark thoughts can intrude into the midst of solemn grandeur! And this will be especially monstrous, just as if a hammer should fall on the strings in the midst of a majestic symphony. Again let us not think of the majestic symphony as something beyond the clouds, and that here we are crawling in the filth of dirty refuse. Precisely, "as in heaven so on earth," and here in the midst of life resound the echoes of the loftiest canticles. But let us not sully these torches, let us not extinguish the luminous flame in the chalice.

Not by accident have both the greatest acts of humanity and the everyday manifestations of life been connected with the great form of the chalice. The language of symbols lives from the most ancient times to the present. True, people in their ignorance often play

with great symbols. They repeat the most beautiful designations in light-mindedness, without any wish to render an account as to where and how it is meet and proper to pronounce them. No responsibility will be a mean false devotion if it be realized in joy of the spirit. Each drooping of the spirit is also deposited in the chalice. But each spiritual joy lights up as a beautiful and genuine diamond.

Someone has said that our own times drive all joy out of life, whereas the life of even certain primitive peoples still preserves the sparks of joy in the whole of their everyday existence. Beautiful is the joy of the spirit. It cannot be broken by any grimaces of death! Spirit and Fire! The flame above the chalice! The more luminous it is, the more beautiful are the treasures preserved therein.

Even in the deserts stand the guardians of the flaming chalice.

AT HAND.

BY H. E. PROF. NICHOLAS DE ROERICH,

Naggar.

The spear we shall thrust into earth.
Ended is the first battle;
Mighty, my tempered sword;
Calm was my spirit and valiant.
But during the battle, I saw, boy,
That thou wast distracted by glamour of
flowers.

When we encounter the host
Aflame be with battle, my child,
Believe in the nearness of victory.
With an eye unflinching of steel
Keenly look around thee
Whether battle is needed—
If victory dwells in thy spirit.
Let us delight in the flowers,
Rejoice in the sigh of the dove;
In the brook let us cool our faces.
Behind the rock who has hidden?
To the battle! The host
Is at hand!

SCIENCE AS METHOD.

BY MR. DAVID MALAIPERUMAN, M.A. (Madras), Ph. D. (Chicago).

SCIENCE, in the modern and critical sense of the word, is before everything else a method. This method may be traced back to prehistoric times. In the childhood of the race scientific method was merged with and overshadowed by other factors, such as myth, fantasy and emotional reaction to the mysterious forces of nature. The method of intelligent adaptation to the mysterious complexity of nature marks the dawn of scientific control. It took many generations to formulate this method with any degree of satisfaction. It was first formulated in the field of mechanics and later it expanded beyond those limits.

Proclaimed by Francis Bacon, the method found its actual formulation in astronomy and later in the brilliant works of Copernicus, Kepler, Galileo and Darwin. The formulation and adoption of this method in the fields of the mathematical, physical and biological sciences, the emancipation of reason, the substitution of empirically derived knowledge in place of traditional authority, the recognition of relativity instead of absolutes, has revolutionized human thought. Recently the canons of the scientific method have been adopted in the realm of sociology and psychology.

The pre-suppositions of the method are that everything open to human observation in nature may be reduced, at least in the distant future, to terms of the known or knowable data of the sciences; that there is nothing sacrosanct or supernatural that science cannot invade; that there is uniformity of nature, that things have certain common

natures and relations, which pertain to certain invariant orders; that all knowledge is relative and all findings approximate.

The pre-requisites of the method are: (a) Selection and delimitation of the field of inquiry; (b) familiarity with the field in which the inquiry is to be made—for example, it will be absurd and preposterous for a biologist to dabble with the quantum theory or hunt for the cosmic ray; (c) special interest must be obtained with right habits of response; (d) dispassionateness and objectivity must be allied with a critical attitude whether the field of inquiry concerns a microbe, mammal or maple tree.

A great deal of confusion prevails regarding the definition of the scientific method. Scientists themselves are not agreed as to the canons of the scientific method. For the sake of precision we must examine the different views. Ever since the days of John Locke, the *empirical* approach has received a great deal of momentum, but to-day we claim that this needs to be supplemented by other methods. The basic assumption of empiricism, that experience yields knowledge, is fallacious. For knowledge involves two factors: the given and the conceptual interpretation. For instance, I may have the pleasant *experience* of food that is delicious, but that does not in any way indicate that I have *knowledge* of the ingredients that comprise the food, *vis.*, the chemical properties, relative percentage of vitamins, etc. It must be subjected to the right method in order that experience may attain the status of knowledge. Neither can

scientific method be confused with *positivism* which is the view that knowledge is based on sense data. The same criticism pertaining to the empirical method holds true in this case as well. Further, scientific method is not identical with the *rational method*. Reason is but one of the indispensable factors in attaining knowledge, and reflection or logical consistency alone cannot yield knowledge. As Hobson* points out: "The reasoning faculty we distinguish as a separate faculty by abstraction only; its function is coordinative, and it is operative upon data which it does not, and cannot alone originate." Popular opinion tends to identify the scientific method with the *experimental method*, with the techniques and such instruments or apparatus used in the laboratory. Experiment includes more factors than mere confinement to laboratory conditions. Further, experiment is but one of the conditions of scientific method. There are some people who understand the method as one referring to that used by the physical sciences. But scientific method is more inclusive, though in each department of the science it has assumed highly specialized and technical forms. Moreover scientific method is more than *common sense*, for it not only collects and classifies facts unbiasedly, but lets the facts themselves suggest a working hypothesis—which of course requires a plenitude of previous knowledge as well as the gift for fresh insights. Creative imagination can help to foster it, but the task of verification and test of the hypothesis, clue or insight, must be left to scientific method. Science, as Cohen† points out, may be distinguished

from ordinary common-sense knowledge by the rigour with which it subordinates all other considerations to the pursuit of the ideal of certainty, exactness, universality, and system.

Thus scientific process involves previous knowledge (common sense), the fruitful hypothesis, guiding idea, clue or insight and the *method* by which to test, verify, and apply the idea in such a way as to yield coherent knowledge.‡ This method, simple as it is in essence, has been acquired and refined with great difficulty and is employed only by a minority, and even they confine its application to a restricted field of interest.§ For instance, every scientist does not apply it to the field of religion or social relations. One may be a renowned astrophysicist or geologist but when it comes to religion or politics one may be just as fanatical or dogmatic.

The primary factors involved in the method of science are observation, reason and experiment. (a) *Observation* of data, as will enable the observer to discover general laws that govern the facts in question, implies careful selection, comparison and regulation of method to ensure accuracy. (b) *Reason*: Through logical analysis and reflection all bias is reduced and reason enriches one with a great variety of possible hypotheses or anticipations of nature. (c) *Experiment* pre-supposes preliminary acquaintance with the technical methods of experimentation appropriate to the field, as well as some knowledge of the results which previous investigators in the field have gained by use of these methods. Experimental behaviour implies

* E. W. Hobson: *The Domain of Natural Science* (Cambridge University Press, 1926), p. 472.

† Morris Cohen: *Reason and Nature* (Harcourt Brace & Co., 1931, New York), p. 83.

* Wieman, H.N.: *The Issues of Life* (Abingdon Press, New York, 1930), p. 182.

§ Bertrand Russell: *The Scientific Outlook* (Norton & Co., New York, 1931), p. 13, f.

its operation under controlled conditions. Statistical studies are designed for the evaluation of variables where controlled experimentation is not possible.

Observation, reason and experiment are interrelated in the process; one supplements the other and of course the appeal to experience is involved throughout: first as the matrix in which inquiry arises, and secondly as that on which all theories must be tested. The method introduces order into observed facts and fits into a conceptual scheme isolated entities. Coherence, applicability, relative simplicity and shareability are conditions that must be satisfied by any conceptual scheme. The laws and class concepts of science are shorthand devices. The farther that science advances the more its boundaries reveal themselves and hence the more clearly does it point beyond itself. Scientific concepts are therefore variable.

Certain limitations of the scientific method must be accepted. It is a method of abstraction and selectivity. Science is often faced with the impracticability of controlled experimentation. It is hardly possible to bring under laboratory conditions the great motive forces of life or meddle with human beings or institutions. The method needs to be refined and also modified in the social and humanistic sciences. The concepts of science are rather inadequate, as for example, in the field of biology. The introduction of such terms as "entelechy," "élan vital," etc., seems to testify to the inadequacy of the primary concepts of biology. Since scientific method demands precision, abstraction, concentration of attention to certain limited area, adaptation of the organism to certain well-defined functions, the constant adherence to this method alone may circumscribe human life and stunt growth. Eddington refers to the world of science as a symbolic world of pointer-readings. Scientific categories do

not do justice to such richness of experience as that of the artists, lovers, or mystics. The method of science in relation to mystical experience corresponds to that of the grammarian and lexicographer to poetry. The surplus wealth of experience which science may ignore is taken into account by the mystic. Man is so constituted that he must constantly react to the surplus wealth of experience, in order to attain the more abundant life. Eddington* points out that such rare moments, when one is fully aware of the significance of the universe, are beyond explanation in terms of physical measurements or the metrical symbols of the mathematician. In the quest for the more abundant life both the experience of the mystic as well as the method of science are indispensable. Only those who can combine and integrate the greatest rigour of reason (scientific method) with the utmost capacity for devotion and appreciation (mysticism) shall rise above the perplexities and intricacies of the work-a-day world and interact with that process of dynamic inter-relationship which sustains the supreme good.

* Sir A. Eddington: *The Nature of the Physical World* (New York: Macmillan Co., Ltd., 1929), p. 317.

THOU WILT DESIRE.

BY H. E. PROF. NICHOLAS DE ROERICH,

Naggar.

As sign of the victory, child,
Do not garb thyself
In a colorful garment.
Victory passed, but the battle will be.
They shall fail to defeat thee
But surely will come the encounter.
They past life perceiving
I behold glorious victories
And how many sorrowful signs!
But victory is destined for thee
If victory thou wilt
Desire.

INDIAN MUSIC AND WESTERN METHODS.

MUSICAL HISTORY-MAKING AT DELHI.

BY TANDRA DEVI,
Srinagar.

[*Tandra Devi* is the pen name of that celebrated musician, artist, writer and mystic *Maude MacCarthy*, who has now settled in her Ashram in lovely Srinagar. Poetess and playwright of international reputation, she is the pioneer of phono-therapy in Europe and the first woman to bring Indian music to the West.

At present she is working strenuously, her advanced age and physical illness notwithstanding, for the revival of Indian arts and crafts in modern forms. She is a fearless exponent of the highest ideals as applied to industry, arts and crafts.

Her understanding of Eastern and Western music is deep and she is an accomplished musician who is equally proficient in vocal and instrumental music, both oriental and occidental. She is a cultural ambassador whose mission is to spread Beauty, Truth and Joy. *Editor.*]

Can Western methods be applied to Indian music is a question which may have arisen in the minds of some of those who listened to a concert in aid of the Tuberculosis Fund, which was given in Delhi not long since, and broadcast. The concert was attended by Her Excellency the Marchioness of Lichfield. On one side of the platform was the Viceroy's Band, lent for the occasion, and on the other side, a Band of Indian musicians reading and playing from Western notation. European and Indian musicians have played together before. Western notation has also been used by Indian players. The novelty and the importance of this concert (the first of its kind, as far as we know, in musical history) lay in other directions. It is not my concern to make a detailed criticism of the programme. The All India Radio, Delhi, has already announced that more will be given by John Foulds on similar lines, and people can form their own opinions. Your readers may,

however, like to know something about the musical convictions which have prompted a Western composer to endeavour to create an Indo-European orchestra.

For ages, *rāga* (the "melody-mould") has been the basis of Indian music. One idea underlying this lovely old art-form is that by dwelling upon and repeating a small musical formula, a deep psycho-physiological effect is produced. If the thing is done well, there can be no doubt that this is true. Unfortunately, the pedants on the one hand, and public neglect and modern vulgarity on the other, have greatly hurt this grand old art. But the principle of *rāga* survives. It is a real thing which nothing can destroy. In the West, we have had a different musical development, distinguished mainly from the Eastern development by harmony. Occasionally we find traces of the principle of *rāga* also in Western music. Bach and Beethoven were particularly addicted to it, though it takes an experienced musician to discover the similarity, which I will here express for the layman as the "motif" (as, for instance, the four notes at the beginning of Beethoven's C minor Symphony, on which he dwells, and out of which he develops such a magnificent movement.) This is the spirit of *rāga* manifesting in a Western form. Wagner, also, was imbued with it. His "leit-motifs" are famous—nearly all of them consisting of a short melody-form as in Indian *Rāga*, only differently developed. This fundamental similarity is natural, for one reason, because all our scales and modes (*mālas*) without exception, were originally derived from India. Our chief scale, which we call "major-diatonic," is the 29th

mṛlakarta (mode) of the Karnatic system, which mode is called *Dhirasankarabharanam* in South India, and was taken to Europe by Pythagoras.

However different our Western music may seem to be as compared with Indian, it is vitally important to remember that both spring from a common ancient culture. Indian music has in some ways retrogressed. European music has grown from small beginnings made some 400 years ago, to be a healthy, noisy, poetical and hopeful adolescent. For some time, this beautiful child of the ancient Aryan musical culture has been in a state of restless, open revolt. He has discarded his old harmonic theories and methods. He has tried every cacophony under the sun, but is still unsatisfied. The young cannot do without the old, nor can the old exist happily without the young. So we find the modern harmonist studying India, assimilating the spirit of *rāga*, and endeavouring to build up a new kind of harmony upon it. Can this really be done? Is it a legitimate form of art? I think so, certainly. Two things are needed if it is to be healthily built: (1) The Western harmonist must control his rebellion against old forms to the point of being willing and able to find harmony in the *rāgas* themselves or he will ruin Indian music by taking the vital characteristics out of it. (2) Indian musicians and the public must be willing to turn away from vulgar theatrical styles on the one hand, and pedantic classicism on the other. They must co-operate with creative artists in the effort to make way for a true union of Western harmonic principles with those of *rāga*. What is the principle of *rāga*? *Rāga* is a series of notes, and concentration of musical effort *within that series* is the principle of *rāga*. (This must suffice for an article of this scope).

Harmony can be built up within a small series of notes, if the harmonist will submit

his art to the severe discipline which doing this entails. Such harmony as will result (providing that the harmonist is also an artist) can be appreciated by the Indian listener if he will free himself from his racial conceptions—or misconceptions?—of *rāga*; just as the Western must free himself from *his* racial misconceptions of harmony, if these two arts are to be united.

No good will be accomplished for the development of Indian music on harmonic lines if people merely study Western harmony and import it into Indian music without drastic modifications. The Western harmony itself must be modified to fit the exigencies of the Eastern art, and that is what John Foulds is endeavouring to do.

As to notation: his Indian players played from Western notation, and will have to do so, if an orchestra is to be built up. But that does not mean that Western notation should be adopted for all Indian music. Indian small bands and singers must always work in a semi-improvisational manner, and it will be deplorable if the attempt which is being made in some quarters to foist Western notation upon these Indian musicians is successful. A kind of "sol-fa" notation has been used for ages for this music, and it is quite adequate.

The old art should be reverently conserved; the new art should be vigorously encouraged.

If we are to have grand orchestras in India, we must aim for real symphony orchestras; but these should not be like London and Philadelphia symphony orchestras, they should rather be a new creation for India. A symphony orchestra could not be built out of the existing material in even the finest Indian instru-

ments. Other elements are required, and these are provided by some of our Western instruments. When these are heard in carefully architected structural unison with the best Indian instruments, the effect is beautiful. Western orchestras lack just what Eastern instruments can give them. But before we hear the Indo-European orchestra at its best, we will have to get down seriously to the business of improving the craftsmanship in Indian instruments. No doubt this bad craftsmanship resulting in poor quality of tone and clumsy gadgets, is the outcome of several centuries of neglect. Discerning patronage of Indian instrument-makers will therefore be an essential, if symphony orchestras are to be built up

in India. We must encourage and help indigenous craftsmen, and above all, stick to the old models of Indian instruments, which cannot be improved upon, except in a few minor details of fittings and gadgets.

How sad it will be if, just as Western musicians are convinced of the value of these instruments, Indians scrap them! Europe and America will soon be needing to use them. A start was made at that Delhi concert by a musician who knows what Europe and America want. Western instruments, like Western scales, originated in the East. What more natural, then, than that arts and instruments derived from a common source should be united in an Indo-European orchestra?

OUTLINES OF THE GEOGRAPHY OF THE WORLD

Prepared in accordance with the Syllabus in the subject for the S. S. L. C.

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WITH A FOREWORD BY

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A LITTLE THOUGHT-OF EDUCATIONAL DANGER IN THE SCHOOLS OF BENGAL.

BY MR. J. M. DATTA, M.Sc., B.L.,
Calcutta.

SOME three years ago the *Social Service Quarterly* of Bombay editorially wrote thus:—

"Recently a deputation of the Youth's Welfare Association, Lahore, waited on the Minister of Education with the object of drawing his attention to sexual abuses in public schools. The Memorandum submitted by the Association to the Minister urged the necessity of laying down severe penalties for *teachers seducing boys* (italics ours). It seems that this problem about sexual abuses on the part of teachers in relation to their students is peculiar to the Punjab. The fact that a responsible Association should give such prominence to the evil and advocate severe measures for its removal leads one to believe that the evil must have become common in the province. Had it been as common in the other provinces complaints would have been heard about it long ago. It was a revelation, we presume, for people in other provinces to know that this unnatural vice was so prevalent in the Punjab, when they read the news of the Y. W. A.'s memorandum and deputation to the Education Minister.....The complaint about sexual abuses in schools in the Punjab brings to mind a larger social problem. The root cause of the evil must be traced to social conditions in the province. Questions such as whether the percentage of unmarried teachers in that province is higher than in other provinces, whether the lower proportion of women to the whole population,

has anything to do with the evil, whether unnatural vice is prevalent there by tradition, and whether the purdah system can be held responsible to any extent for it, deserve to be carefully considered. The subject is an unsavoury one, but in view of the disastrous effects of the vice on the physical and moral well-being of the rising generation, it deserves to be tackled in the most practical and scientific manner."

The problem is not absent in Bengal; the vice is there and fairly well-spread; and it is feared it is spreading.

We shall try to discuss the problem in its two-fold aspect—one affecting the teacher and the taught; the other between the boys themselves. And we shall indicate briefly the favourable circumstances which help its growth and spread.

The vice is of semitic origin; so it is not so widespread as it is in the Punjab. There the usual defence of the wife in a suit for the restitution of conjugal rights is that the husband wanted to know her in the wrong way. Here the vice, though well-spread, appears to be more sporadic among the Hindus; and among the Muhammadans, excepting in the districts of Chittagong (where they are partly of Arab origin), Noakhali and Tippera and the city of Dacca, and perhaps the districts of Rajshahi and Dinajpur it is not very widely prevalent.

The vice among the Hindus appears mainly to be confined to certain depressed castes in certain localities, e.g., among the

Kaoras in the 24 Paraganas, but not in the neighbouring district of Hooghly. We do not mean that the high castes or other castes are free from the vice, e.g., it is widely prevalent among the Vyasokta Brahmins of Midnapore and Bankura; but generally among the higher castes it is rarer. Among the Hindus it is looked down with positive disgust and horror; it finds no countenance even among the dissolute Vaishnabs of *Neda-Nedi* class. There is not the shadow of a sanction even among the 'left-handed' orgiastic *Tantras*.

But unfortunately it is not so with the Muhammadans; they do not regard it with the same horror or loathsomeness. *Dur-ul-Mukhtar* is a Muhammadan law book of high authority. At p. 217 of the Lucknow edition (English translation), we find:—"And (*Rajat* can be effected) by re-marrying her during her *Iddat*—the *Fatwa* is accordingly—the *Jauharun-Naiyarak*—and by carnal connection in the back part, according to reliable opinion, because that too is not without sexual desire." Circumcision and the attendant ceremonies make the boy precociously sex-conscious at a comparatively early age. The writer has been informed by a high authority—a Muhammadan M.A., B.L., who was the Headmaster of a High English School for many years and who was sent to Geneva by the Government to represent India—that the vice is confined mostly to *maktabs* and *madrasahs*, where old type Maulvis do the teaching; and that it is more prevalent in Chittagong and Dacca than anywhere else.

Given the predisposing causes, the increasing relative shortage of females to males in Bengal aggravates the problem. The proportion of females to males has decreased from 992 females per 1,000 males in 1872

to 924 females per 1,000 males in 1931. Though the Census Statistics have been clouded by the wholesale early marriages in anticipation of the introduction of the Sarda Act the proportion of unmarried males (especially of the age 15-20) has steadily increased from 572 per 1,000 living of the same age-period in 1881 to 665 in 1921.

So far as the problem is between the teachers and the taught, the surrounding circumstances and the quality of the teachers themselves favour its spread. Of the 69,036 institutions of all classes in 1932, primary schools number 61,152 and of these 16,359 are *maktabs* for boys. The Eighth Quinquennial Review on the Progress of Education in Bengal says:—"The proportion of single-teacher schools is higher in Bengal than in any other province. In 1926-27 no fewer than 76 per cent. of the schools in Bengal had only one teacher each.....There has been a little improvement.....But in one division 80 per cent. of the schools are still single-teacher schools.....Most of the teachers remain untrained. In 1926-27, Bengal, in this respect also, was at the bottom of the list of provinces. The trained teachers have increased from 14,261 to 19,379 during the period, but the rate of increase is slow. Of the untrained teachers there are, it is reported, many who cannot even read correctly or with ease and it is idle to expect them to teach their pupils efficiently. The fact is that the conditions of service of the primary school teachers are such that the profession can scarcely attract any but those who are driven into it in despair as the last refuge of the unemployed. This is particularly true of the rural districts. Life in the village is not congenial to an educated man; there are scarcely any prospects, no intellectual

stimulus, no cultured society. The pay is not enough to live in comfort.....*Often the teacher is a stranger with no attachment to the villages.*" (Italics ours) [See p. 25 of the Report.]

The average number of boys in a primary school is 38·4. Of these 25 or 22 are in the very lowest infant class, according as the school is a Lower or Upper primary one. "Although the full course lasts five years, the great majority of children begin and end with the first class; they are withdrawn before they proceed further. Most parents regard the school as a convenient crèche, and teachers are glad to make up anyhow the requisite number of pupils for earning a grant." [See p. 23 of the Report.] As the grant-in-aid for *maktabs* or schools regarded as *maktabs* is 50 per cent. greater, the number of non-*bona-fide* students among the Muhammadans is likely to be greater; and this factor is perhaps responsible for the greater wastage among them. The attendance at these schools may therefore be taken to be of the order of some 12 to 15 boys, if not less.

Thus in the single-teacher schools in the rural areas there are great opportunities for committing such vice. The teacher is himself un-educated; there is no check of another censoring eye; there is the paucity of boys; the local public opinion is ignorant; and of the boys in the school, the position of a stepson in a Muhammadan family (who form some 12 per cent. of such boys) is unenviable and his morals are scarcely enquired into or looked after. If the school happens to be a *maktab*, and the teacher a *maulvi*, there is the additional semi-religious halo round him, which helps him in covering up his misdeeds

The age-composition of our primary as well as high school boys is such that it helps the spread of the vice. To prevent its spread it was laid down in 1904 by the then University Commission that no High Schools, be they attached to Colleges or not, are to be within the same compound as the Colleges. This was an attempt at segregation by age. Of the 23,17,000 boys reading in the primary classes, the number of those who are aged 14 and over is 13,000. In primary classes there are even boys aged 20 and over; and the number of such boys is 890. And of the 25,68,000 scholars reading in schools, primary, middle as well as high, as many as 40,000 are over 16—the age at which a boy is expected to pass the Matriculation Examination. In the primary schools in the villages, the danger of such promiscuous mixing up of over-age or adults and young ones is great. The Census Superintendent of Bengal in 1921 finds "that the grown up school boys sometimes found in Eastern Bengal are all Muhammadans," who are generally cultivators. These boys are not *bona-fide* students; and if evilly disposed, having knowledge of matters sexual, they commit far greater mischief. The same apathy, the same absence of healthy public opinion, the same neglect of step-sons as in the case of teachers, help the spread of the vice.

So far as our individual observation and those of our friends go, the vice is fairly well spread and is spreading. It is a pity that the matter is not discussed; and it is not getting that much of attention from the educational authorities which its importance deserves.

THE BIRTH-DATE OF SHIVAJI AS GIVEN IN THE BHAKHARS.

DID MALOJI POSSESS POONA AS HIS JAGIR ?

BY MR. G. D. TAMASKAR, M. A., *Jubbulpore.*

(Continued from p. 307)

MR. C. V. Vaidya has tried to establish in the third issue of the eleventh year of the "Bharat-Itihas-Sanshodhak-Mandal Quarterly" that Maloji did not possess Poona as his Jagir. He says that the description of the "Shiobharat" (verse 45, chapter 1) that Maloji began his residence at Poona is wrong, that Maloji never resided at Poona and that the discovered letters show that it was Shahji who first got Poona as his Jagir. In support of his contention he says the following on the basis of the letters of the "Patrasar-Sangrah":—

"Letter No. 233 of Shaka 1548 Kartik Shuddha 1 (12th October 1626), shows that the said Sadat who granted land to Maroba Gosawi was a holder of the Mokasa of Pargana Poona. Letter No. 246 of Shaka 1549 Vaishakha Shuddha 10 shows that Sharkas Khan who gave a letter to Maroba Gosawi was the holder of the Mokasa of Pimpri of Pargana Poona. Letter No. 252 of Shaka 1549 Shravana shows that Farad Khan was the holder of the Mokasa of Supa. Letter No. 262 of Shaka 1549 Falgun Shukla 14 shows for the first time "Vazarat Suja-at Dastgah Shahji Raje Sarlashkar" addressing the Karkoons and Deshmukhs of Poona and mentions that he having this side took possession of the said Pargana. Of course it is not clear that if the possession was forcible or legal. But we do find Shahji's letters from this time onward relating to the Poona Pargana. As for example, letter No. 274 of Shaka 1550 Shravana Shukla 5 definitely

mentions the assignment of the said Pargana by way of a Mokasa to Shahji. This shows that the Bhonsales did not hold this Pargana before Shaka 1550 or 1549 (*i.e.*, 1628 or 1627 A. D.) It might be that Maloji was deprived of the Pargana, which was then granted to some one else. But so long as we do not discover a document to prove that Maloji held Poona as his Jagir, it is safer to assume that he did not do so. On the other hand, the letter No. 22 of 1526 that was issued from the Poona office shows that it was crown territory. Therefore, the word पुण्यदेश of verse 45, chapter 1, स पुण्यदेशे धर्मात्मा निवासस्वमकल्पयत्। तस्वन् सौराज्यमाधिक्यं नदीभीमरथमनु should be interpreted as पुण्य प्रदेश (holy land). The reference to the Bhimrathi river here justifies this meaning (holy land). Babaji held Pandependgaon as his Mokasa, (letter No. 11 of the "Patrasar-Sangrah") and a letter of Maloji issued from this place has also been discovered, (letter No. 10 of the "Patrasar-Sangrah"). Poona cannot be said to be on the Bhima river, while Pandependgaon is on the Bhima and is also a sacred place. Therefore, the reference by पुण्यदेश in the above verse seems to be to this very place."

It is no doubt an awkward task to criticise the interpretation of a scholar like Mr. C. V. Vaidya; but apparently his interpretation is wrong and far-fetched and the original interpretation published in Mr. Divekar's edition is correct. The letter cited by Mr. C. V. Vaidya himself shows that the Pargana of

Poona often changed hands so far as the Mokasdar was concerned. And Mr. Vaidya himself seems to be aware of this and is inclined to believe that Maloji might have held Poona as his Mokasa. 'Punya-Desh' has been interpreted as Poona on the basis of Bhakhars and tradition and Shahji's attachment for it. Even Mr. Vaidya says that Maloji acquired Poona as his Jagir when he moved from Verul to Daulatabad, the then capital of the Nizam Shah. These are his words in the first issue of the eleventh year of the "Bharat-Itihas-Sanshodhak Mandal Quarterly": "Firstly the Bhonsales originally belonged to Verul itself which was nearer to Daulatabad, the then capital of Nizam Shah, and acquired from thence Jagirs in the Poona District along the frontier of the kingdom." (page 3). So it is clear that Mr. Vaidya changed his opinion only after six months (without mentioning this fact at all) on grounds which are not very strong, for he himself, as we have pointed out, indirectly admits that the Mokasa of Poona changed hands. Moreover, he does not seem to be very definite in his assertion. On the other hand, there seems to be reason to suppose that Malik Amber, who was the dominating minister of the Nizam Shahi, deprived Shahji of the Poona-Supa Jagir, as the two happened to quarrel after the battle of Bhatwadi (1624 A. D.) Shahji after leaving the Nizam Shahi on this account entered the service of the Adil Shah towards the end of 1624 or the beginning of 1625 A.D. (see a mahajar printed in the "Shio-charitra Pradeep," pages 226-227).

सु ॥ सन सीत इसरेन अलफ कारणे महजर देसा जे राघोजी बिन वील पाटील सेंडकर मोकदम मौजे चामली प ॥ पुणे या मधे व हवजी बिन साउजी कामटे हरदो जणामधे मौजे मारचे मोकदमीचे बदल करकवा लागला इत्यादी.

दुराईस मानीत नाही ऐसा कुछम केलायावरी शाहजी भोसले इदलघाई यासी गोसमाल दिव्हा बराबर साहेब नामजाद घेऊन आले शाहजीस गोसमाल देऊन गणीमास सालपा घाटी कोढिला हे खबर आपण ऐकोन हुजूर आलों इत्यादि.

शेवटी "शके १५४७ सन १०१५ चे सालची महजराची नकल" अशा दोन ओफी आहेत.

Rajwade's "Sources of Maratha History," Volume 15, article 398, dated the 28th July 1625, shows that Shahji yet held Poona and made a grant from this place. So, in all probability, Shahji inherited Poona as a Jagir from his father. His later attachment for it confirms this view.

WHEN DID SABHASAD WRITE HIS BHAKHAR ?

This question might seem irrelevant as at the end of Sabhasad's Bhakhar, it is written that it was finished on the 1st of Chaitra of Ishwar Samvatsar Shalivahan Shaka, 1616, at Chandi (i.e., Jinji). But everybody knows that Ishwar Samvatsar does not agree with the Shalivahan Shaka 1616, but that it agrees with Shaka 1619. How is this discrepancy to be explained? In order to explain it, one must remember that it is more probable to misread or miswrite a figure than a word. Therefore, the words "Ishwar Samvatsar" are correct. The last 6 of 1616 Shaka should have been either misread or miswritten. In order to effect an agreement between the name of the year and the number, Shaka 1616 ought to be Shaka 1619. There are two points to be found in Sabhasad's description itself, which support our contention. In the prediction said by Sabhasad to have been made by Shivaji about what would occur after his death, it has been said "when Rajaram will begin to rule, he will recover the kingdom and show greater achievements than myself,"

Making some allowance for the flattery of Rajaram, which Sabhasad has done at many places in his Bhakhar, it can be accepted by any one that the position of the Marathas was on the whole much better towards the end of Shaka 1618 than towards the end of Shaka 1615. The "Jedhe Shakavali" establishes this point at a glance. Secondly, in the same prediction, it has been said "Santaji Ghorpade, Bahirji Ghorpade and Dhanaji Jadhao, if spared, will show great achievements." The words, "if spared," are worthy of note. They show the probability of their death sooner or later. The cause of their death, that Sabhasad could see, was not the probability of their being killed in a battle. To this danger, every fighter is exposed. He rather refers to the probability of their being killed on account of private enmity. For some time Santaji Ghorpade and Dhanaji Jadhao were on inimical terms. This fact is well-known in history and there is a vague reference to it in the "Jedhe Shakavali" also under Shaka 1618 (i.e., 1696 A. D.) Bahirji Ghorpade seems to have proved a traitor to Rajaram and the Maratha cause and joined the Mughals at least once. It was in the month of Margashirsha Shaka 1615, that he was conciliated and sent to the relief of Tanjore. So, it was almost towards the end of Shaka 1613 that he came back to the Marathas. It was after this that he got the opportunity of showing valour or having some achievement to his credit. In the same way Santaji Ghorpade had had a quarrel with Rajaram in the Vaishakha of Shaka 1615 (i.e., May 1693). It was in Shaka 1616 that Shankaraji Pant Sachiva conciliated him and made him take an oath that he would no more be disloyal and was then despatched to the Karnatic with a number of officers and 25000 forces under

him. So, the 1st of Chaitra Shaka 1616 does not in any way agree with the description of Sabhasad himself. So it is proved positively and negatively that the 1st of Chaitra must be of the year Shaka 1619 rather than of Shaka 1616. It was in Ashada Shaka 1619 (July 1697) that Santaji Ghorpade was killed by Nagoji Mane near Sambhu Mahadeo and that in December of that year Jinji was besieged by Zulfikar Khan and taken soon after. So it is clear that Sabhasad completed his Bhakhar on the 1st of Chaitra Shaka 1616 (April 1697).

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CULTURE AND EDUCATION IN THE NEW GERMANY.

BY DR. TH. MUEHE,

Senior Inspector of Schools, Hamburg.

THE National Socialist State should be taken as the political expression of a cosmology rooted in the inherent nature of the people. Hence its *claim to totality* which amounts to nothing more nor less than that the people as a whole in the more important spheres of vital activity must be in harmony with this conception of things and values, should there be freedom from possible influences which could threaten the uniform effort towards a common destiny of those forces sustaining the life of both people and State and, therefore, the very existence of the latter. The "new" in the New Germany is to be found in the completeness with which National Socialist philosophy by appealing to the self-preservative racial instincts in each individual, has been able to attract and hold the entire people and so shape its history. This spiritual access to power, however, was only possible along with a political access to power. The struggles and ultimate victory of the National Socialist Weltanschauung, therefore, were not found recorded in philosophical writings and lectures but in the struggle for the soul of the German people put up by a single nameless soldier throughout a decade and a half with unflinching courage and resolution, which struggle, incidentally, meant the securing of political authority. The triumph of this philosophy was only subsequently confirmed and its future assured in those spheres usually the playground for all philosophical controversy, namely, books and the lecture hall.

The National Socialist cosmology is in its essential core as old as philosophy itself.

That which Aristotle termed "entelechy," Schopenhauer "the will to live," Bergson "elan vital"—that mysterious, formative, ever regenerating life-force, outliving and transcending the individual, creates the dynamic whole which is "world" to this philosophy. This life-force manifests itself in different ways according to the kind of living beings concerned. Thus, it has designed the human species as a "zoon politikon", whose function it is to be a conscious member of the political entity or "people" to which Nature has allotted it. Looked at from this point of view, there is much essential similarity between the structure and functions of a people and the structure and functions of a cellular organism, although there is also a considerable diversity between them as regards individual compactness and structural differentiation. A people, indeed, is a biological reality whose cultural law is organically effective through the psycho-physical organism of each individual as a super-individual formative power, and in the realisation of awakened consciousness shines as an idea governing purpose and action.

When in July 1936 Adolf Hitler addressed the office-bearers of the movement and compared the unfettered individualism of the country's recent past with a "new type of German" as the final and highest aspiration of National Socialism, he meant, doubtless, a race-conscious type in whose soul the motive idea of his conscious striving is conquest of the super-individual political instinct over individual self-centredness. For the first time in German history a grand scale attempt

is being made—and in the process of becoming to realise in things political as well as in things specifically human, that which Schiller's dictum demands in the spirit of German idealism: "Seekest thou the highest, the greatest,—let the plant teach you: be thou consciously what it is unconsciously. That is it!"

With this as an aim it is easy to explain if in the Germany of the Third Reich a fundamentally new conception of culture is ushered in, tracing its authority to the understanding of human nature given by Aristotle 2000 years ago as a "zoon politikon." If the standard for a "cultured" person in Germany for the past 150 years was that of an individualist and liberal citizen of the world, in harmony with the autonomy of personality which in the perfected form rested either in consummate refinement, accomplishments or poise, under the National Socialist cosmology, it is of one who is willing and able, body and soul, with one's whole personality, to become an organic part of one's community. The more perfectly the individual is able to employ his talents and qualifications for this his natural mission, the more is he truly "cultured".

When we speak of a "cultured" individual, we therefore mean one who conquers all outward opposition and the innate weakness of the flesh by the exercise of his racial instincts because he is unconsciously aware that the value of his personal life will be solely judged from those of his achievements that have benefited the people to which he organically belongs by the will of Providence, his birth, and his descent. It does not follow, of course, that he should be indifferent to his individual prosperity, his personal reputation or the success or failure of his plans; but it does

follow that all these things are of secondary and not of principal importance.

Hence, a "cultured" person is one whose every action proves that he wishes to conform to that natural law that has made him a "zoon politikon." In actual practice, however, we must make certain allowances for the imperfection of human nature, and must be content to take the will for the deed, because no ideal is ever attainable completely.

Education in the New Germany is, accordingly, and in every respect, based on this conception of culture—no matter in what sphere. In all educational institutions from the Kindergarten to the University, activity centres on training and developing the physical, ethical and mental forces toward a "zoon politikon" along natural lines, whose characteristic feature is national fellowship under which both men and women alike are looked upon as "political soldiers." Admittedly the past was not devoid of indications as to the importance attached to physical and moral training in education as a whole, yet the practical application thereof in the curriculum did not get much beyond the stage of platonic consideration. The National Socialist State has made the first serious attempt to effect a fundamental school-reform—naturally still in its initial stages—under which the training of a healthy body and the moulding of character is given as much attention as, if not precedence over, the training of the intellect. Along with the realisation of the biological conception of natural culture to be found only in the development of his "Volkstum" from the natural gifts of each individual, the inference is that perfect culture is conditional to "belonging" to one's own or a closely related people, not only in the politico-cultural

sense but more especially by birth and descent. The possibility of higher education would appear to be dependent, therefore, upon a racially reliable extraction, a feature brought out in the regulations governing admission to the secondary schools as prelude to University careers or such professions which to all appearances are destined to produce the future leaders of the country. The basic principles governing the examination of children for attendance at the higher schools after completing their obligatory four years at the elementary public schools (*Grundschule*), are laid down in the Decree made public on March 27th, 1935 by the Reich and Prussian Minister for Learning, Education and National Culture. As with all Ministerial Decrees, the one in point applies to all countries and provinces of the Reich. It emphasizes the duty of the secondary school "to reject from among the boys and girls attending it those who are unsuited and unworthy in order to render greater assistance to the capable and more deserving." The process of elimination takes place not only at the time of entry, nor on removal into one of the more advanced classes, but is applied continually throughout schooling and can have as a consequence the expulsion of unsuitable elements. However, whereas under the rules formerly observed, with but few exceptions, removal from the higher schools was incidental mainly to deficiency in scholarship, to-day the sifting takes place according to intellect, fitness, character and qualification for citizenship.

Physical selection outlines three possibilities by which admission may be refused or expulsion required: 1. Children heavily handicapped by incurable illnesses sapping their vital energy, and the hereditarily diseased;

2. Children who are permanently diffident about bodily care and despite all educational effort are unable to overcome this condition; 3. Children who invariably break down during physical culture if this is due in the joint opinion of the medical inspector and instructor to lack of backbone and the proper spirit.

The third reason for expulsion provides the transition from the physical selection to one on the *basis of character*. On this score, aside from the reasons formerly liable to call for expulsion, there is another and new consideration which is typical of National Socialist education, namely, that "repeated failure to display comradeship and team spirit" can result in expulsion "if all attempts at improvement prove fruitless."

Finally, the selection according to citizenship will have to remain elastic for a certain period of transition in order to avoid undue hardships. Inasmuch as non-Aryan scholars, that is, those who are unable to prove their parentage (parents and grand-parents) to be of German or related stock, are in attendance, they may complete their schooling provided "they do not repeatedly injure the community or the State through their behaviour in and out of school," a behaviour which would result in expulsion for Aryan scholars as well.

In future the selective process according to citizenship will have its chief safeguard in that only Aryan children will be admitted to the higher State schools. That in view of the immense importance attached to physical, ethical and racial characteristics—requirements which by no means exist only on paper as was so often the case in the "good old times"—the selection according to intellect should not go short is clearly apparent from

the strict regulations for removal if a pupil fails to pass his examinations. Unless backwardness is due to temporary ill-health, pupils in the lowest form who at the end of the school year fail to qualify, are obliged to leave the higher school and are only given a last chance three years later to complete their education there. Finally, all those are excluded who have remained in the same class for two consecutive years or in two consecutive classes have each year failed in the tests.

This elimination Decree of March 27, 1935, has not unjustly been described as the milestone on the road to school reform in the Third Reich, representing as it does the first step to a fundamental reform of secondary education in the direction of National Socialist precepts throughout all Germany. Approximately one year later, on April 20th, 1936, the second determining step was taken, again taking the form of a Decree introducing a unified organisation of the secondary school system. In the course of the past 50 years, but more especially in the post-war era, this system had been greatly divided in the matter of organisation, so much so that the variety of schools with their many ramifications and divarications led to such a confusion of particular formations which were hardly comprehended even by experts and in which the individualistic abstractions of that time were not very agreeably reflected. The Decree of April 1936—by way of clearing up the reigning anarchy—furnished the prospects of a uniform and organic educational system expressive of integral German thought and nature. By virtue of the Decree which ordains that—apart from the grammar schools specialising in the classics located in cities having other secondary schools—all higher

State schools in Germany as of Easter 1937, no matter what their previous standing, shall begin with English as primary foreign language, there will be for those children then entering the *Sexta* (the first form of the secondary school) only two types of High Schools, a majority of roughly 85 to 90% which beginning with the *Sexta* will teach English and in the other subjects—as hitherto—not differ very much from each other; and a small minority of some 10 to 15% having Latin as the chief language, which schools—with very few exceptions—will be found in the larger metropolitan centres. Hence, the five categories into which the preliminary sections of the higher schools of the normal type were formerly divided will be replaced by one single category in so far as those pupils are concerned whose school life begins at Easter 1937, *vis.*, the so called "humanistische gymnasien."

Another measure of fundamental importance is the Decree issued by the Department of Education on October 1st, 1936, which provides that—commencing at Easter 1937—the maximum time for which the pupils who have passed the elimination tests will normally attend school is to be reduced from thirteen to twelve years. This means that the school life of pupils attending higher schools will be reduced from nine years to eight (preceded by the four years spent in the elementary school or rather in that section of it known as the "*Grundschule*"). Reasons connected with the country's social policy and its population policy have made it desirable to effect that reduction. Seeing that the regulations governing the future elimination tests are very strict, that the educational aim has been considerably unified, that the methods of teaching and the curricula can

now be simplified and that a more far-reaching co-ordination of school subjects is made possible, there is no need to fear that the level of higher education will be lowered by the change. Everyone of the higher schools now existing in Germany is called an "Oberschule" or a "Gymnasium" as the case may be, to which generic name the words "für Jungen" or "für Mädchen" are added. If a school has an individual name as well, that name usually precedes the generic one. The course of teaching constitutes an organic whole. It runs from the lowest (or first) to the highest (or eighth) form and leads right up to the examination for the school leaving certificate (or certificate of maturity).

From the sixth form onwards, the "Oberschulen für Jungen" are divided into two sides, one specialising in languages and the other in mathematics and science. A similar differentiation exists from the sixth form onwards in the "Oberschulen für Mädchen," one side specialising in languages and the other in household subjects.

In all the higher schools, the teaching of the first foreign language is started in the first form. The second foreign language is commenced in the third form in so far as the "Gymnasien" (Greek) and the "Oberschulen für Jungen" (Latin) are concerned, but in the "Oberschulen für Mädchen" it is not introduced until the pupils have reached the sixth form (language side).

The third foreign language (English in the "Gymnasien" and French or Spanish in the language-side of the "Oberschulen für Jungen") is taken up in the sixth form. The language side of the "Oberschulen für Mädchen" besides the teaching of a second foreign language (French, as a compulsory subject, offers an opportunity of learning a third foreign language (Latin), also from the sixth form onward (not compulsory). The

passing of the leaving examination by pupils who have attended the sides specialising in languages or in mathematics and science confers upon them the same rights as the "Abiturientenzeugnis" (matriculation certificate) formerly granted by the higher schools but the leaving certificates obtained by pupils who have attended the side specialising in household subjects are of a more limited scope as a qualification for University studies, inasmuch as they only entitle their holders to prepare themselves for a scholastic career. If the reforms in regard to admission and organisation provide the framework and conditions for education in Germany on the basis of ethnology, their execution in turn demands fundamental reforms in the work of actual tuition. Contrary to the pedagogic science in the Germany of yester-year, which was careful of distinguishing types individually predestined "from childhood" and predominantly concerned with discovering and developing mental types in the greatest possible diversity, the school of to-day strives with all the means at its disposal in the way of cultural equipment and national examples to stimulate and encourage the rising generation in national and race consciousness, and in this way to prepare the growing boys and girls for those positions in life which by nature and ability they are qualified to hold within the national community. In order to fulfil this great task there must be available, aside from the necessary book learning, the animating stimulus of a teaching staff of the right mentality and of pure stock. To this end, a process of selection for the teachers analogous to that of the children has been introduced which is carefully applied both at the commencement of professional training and upon taking up active duty. In reforming instruction proper the fundamentals are drawn from history and Germanic lore on the one hand, and ethnology, genealogy and the

natural sciences, on the other. In the teaching of history the "international conciliation" preached by the Weimar Constitution which sounds harmless enough but in reality was the dictate of a submissive pacifism, is replaced by the teaching of tolerance, understanding and respect of all racial individuality as the foundation to national self-knowledge and self-respect. Both in text-books and class work, on national fete days and other school celebrations, great care is taken that patriotic enthusiasm is not stirred negatively by stressing the contrasts with other nations, but positively through love of country and Fuehrer, through pride in the regained sovereignty and position of the Reich as a Great Power. In the main, the teaching of history in the Third Reich, contrary to the neutral eclecticism of former times, aims to bring the present to the fore—without, however, losing sight of historical facts—while appreciating the epochs of German history and of other nations not separately and distinctly but in their bearing upon the historical situation of our day, and on the development of the German people up to the time of their becoming a nation united in a uniform and organic form of State which guarantees their existence within and without.

By virtue of Germany's youth being taught to look upon the history of their country in the bigger sense as stages of a natural process of evolution, with the ultimate fate of being brought together as a unified, vital people, the closest relation is established between history and biology—not that history itself is anything but a biological process. Once the German people as a biological whole—a condition which need not necessarily apply to every nation—is recognised, biology is enlisted to supply the necessary understanding through the laws of nature for the requirements and destiny of that social entity. Thus the teaching of history in the New Germany

with its biological foundations makes it clearly understood that the Commonwealth of the Reich can maintain itself against all external influences so long as the community as a living entity is in order, that is, keeps its blood healthy by mingling only with members of like or kindred races. It is demonstrated on the passage of events during the past few decades and confirmed by the teachings of history that the life of the German people and its culture are not usually threatened so much by external influences as by those forces which by appealing to particularist group interests, opinions and self-centredness tend to suppress the *zoon politikon* in the individual and to divert the natural instincts of homogeneousness and filiation in a common destiny and, furthermore, by deadening the will, cripple the ability to national self-preservation. Thus Germany's youth is taught to understand that the Germans more than any other civilised people of our day have succumbed physically and intellectually to the influence of alien elements, particularly to class warfare sanctified and proclaimed as its "destiny," and that the regeneration of its life forces almost benumbed, was only possible by terminating class warfare and through a biological renewal by ridding the social groups of racially foreign elements. History, therefore, merges into the teachings of ethnology and biology which formerly almost entirely ignored to-day constitute one of the chief sections of instruction as a whole at all German schools, for girls as well as boys, as much as in other respects—against a departure from former principles—the new method of education aims at differentiating between the sexes for reasons of race and hygiene though by no means in a derogatory sense or because of a lower estimation of the girls. One of the fundamental principles governing education in the New Germany is that of racial hygiene, according to which the

activities of womenfolk should be in harmony with their biological functions. The same principle applies equally to the menfolk. "Biological functions" however is a term applied in its more comprehensive sense, embracing all aspects of psychico-physical activities and, for instance, in valuing the mothering instinct in women as the highest biological function which, nevertheless, need not be consummated only or solely in the physical condition of motherhood but—failing this—finds fulfilment in a corresponding spiritual attitude and bearing born of that instinct. The present-day biological instruction at the schools is designed to assist both boys and girls to become full members of the German national community in which men and women shall live not in opposition to, but in harmony with, the duties allotted them by nature, thus giving the guarantee that the nation and race be kept sound and healthy continuing to persist as a community of essentially manly men and womanly women. That all-pervading striving for public spirit the necessity for which is borne out by the teachings of history and biology for the educational idea of the New Germany, serves in addition to coordinate in some way or other all spheres of instruction which is thus able, to a considerable extent, to meet the demand felt in the elementary schools—and in the secondary—for tuition to be as uniform as possible. It stands to reason that it has not been possible so far to draft regulations of a generally applicable character, because the educational reform now gradually initiated is still in its infancy; but the ultimate aim, although pursued along different lines, is substantially the same, namely, to teach natural history, geography and associated mathematical subjects, religion, physical training through gymnastics and sport, as well as the art of the Muses, in line with the uniform division within the living whole of the

historical, biological, race-determined, traditional German nature. Even manner and objective in the teaching of languages serves to encourage public spirit. In opening up the fields of thought of other nations the æsthetic appreciation of their literature is not to be a means in itself. The choice of works to be studied is greatly determined by the possible value in forming the character of the younger generation. In this connection, the understanding to be awakened in them for the essential qualities of foreign peoples, particular stress is laid in seeking to explain the causes of economic and political tensions in terms of these very differences in nature. In the long run, the teaching of languages by silhouetting the differences in other civilisations, also becomes a part in the general educational aim by awakening greater understanding for things German.

The change to be effected in the teaching of gymnastics and sports, as means for raising the racial standards of the German people cannot be so much concerned with aims and methods (because that teaching must always strive after mass proficiency rather than individual achievements) as with the proper appreciation of the results and with the value that must be ascribed to them in relation to that customarily attached to the pupils' achievements in the intellectual subjects. This is already brought out in the new regulations governing the choice of pupils entering the higher schools. As to what a systematic racial-biological selective principle demands in this respect, as much as in regard to a fundamental training of character and spirit, the school as such with the greater burden of imparting book learning is unable to effect. What the school fails to give is made up for in the Hitler Youth, (divided up into the Young Folks (J. V.), Hitler Youth (H. J.) and German Girls League (B. D. M.), Storm troop

and Praetorian Guard (SA and SS) formations.

In these organisations there is ample opportunity for steeling the body and character, and cultivating the proper community spirit with the view to becoming part of the public system built up on the leadership principle. In the years leading up to the Revolution, the H. J., like the SA and SS embraced a not inconsiderable portion of the young people despite all prohibitive measures taken against them. In the course of 1933, some 35% of all school boys and girls belonged to one or other association of the movement. This percentage has steadily increased from year to year. About the middle of 1936 it had reached more than 90%, so that the Law passed on December 2, 1936, making compulsory the entry of all German children on attaining the age of ten into the "Jungfolk" or J. V., constituting the first grade of the Hitler Youth, in effect, only meant the confirmation in theory of something which had already become fact.

If next to home life, the school and Hitler Youth are the chief factors in educating the rising generation, this shaping of body and character is continued on leaving school in the Labour Service. At the same time, membership of the SA or SS, as well as fitness for military service and the two years active service with the colours, are becoming more and more the pre-requisites for appointment to State and Public Office and the preparation for any career which calls for University studies.

The University curriculum is governed by the same educational principles as apply to the schools. Accordingly, the sphere in which the life and studies of the students at the

Universities, Academies, Colleges and the like, takes place, is in a process of transition which, as will be understood, can hardly have been completed in the course of five years. The former student corporations and societies have been dissolved in favour of an all-embracing "Association of German Students" and a "National Socialist Student Organisation", divisions of which are to be found at all centres of learning, the supreme management of which was placed in the hands of one man as of the middle of November, 1936. Every German student must belong to the former, and membership in one or other of the "Kameradschaften" of the National Socialist Student Organisation is voluntary.

The teaching staff in both schools and Universities must be of German stock and ready to help in building up the National Socialist State, being organised in the "National Socialist Teachers' Association." The latter after the dissolution of all former societies which existed independently of each other and frequently at daggers drawn, has transformed the individual specific teachers' groups to professional sections of a uniform educational organisation with one political and philosophical belief.

Thus if all aspects of the work of education in Germany—whether already completely organised or in the process of becoming—are under the sign of making a "zoon politikon" of the individual, a process which according to the National Socialist cosmology is the natural and divine law, the intention is by no means that this method of education should deliberately shut off young Germany from the world of knowledge in so far as this might appear unproductive or inconvenient to the political aims of National Socialism, much less impose restrictions of a political kind

upon science or learning after their liberation at long last from the dogmatic religious fetters of the Middle Ages. If National Socialism negatives the "Autonomy of Knowledge", this does not affect its methods based on the idea of truth and nothing but the truth. What is contested, however, is the claim of knowledge to exist for its own sake. National Socialism demands that knowledge—and no less Art mutatis—should serve life in its search for truth, and that means for learning in Germany to serve the living needs of the people and, accordingly, either to turn its attention first and foremost to such problems as were, are or will be of importance to the existence of people and State, or at

least to apply to every work of investigation and research, be it ever so insignificant at the moment, the spirit of the motto of the Roman athletes: "Pro patrio est dum ludere vide-mar."

Thus it will be understood if present-day Germany builds up the "political University" and the "political school", if the whole educational system and youthful training is saturated with a "political" spirit and must certainly remain so if the conditions which have at last become established for the German people to live independently on that small area given them by Fate in the heart of Europe, are not to be shattered all over again.

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STARS.*

By A. A. K.

1. CHARACTERISTICS.

THE stars are self-luminous bodies like the sun. They are not, however, all alike in brightness. Two thousand years ago, Hipparchus divided the naked eye stars into six classes, assigning to the first class all the brightest ones about twenty in number and to the sixth the feeblest ones just visible. This classification takes no account of the differences between stars of the same magnitude class. For example Sirius and Capella are both stars of the first magnitude but the former is considerably brighter than the latter. We now adopt a more precise measure, on the principle that a difference of 5 magnitudes corresponds to a brightness ratio of 100 to 1 and a star of x magnitudes has a brightness ratio $10^{-2x/5}$ to 1. On this scale the magnitudes of Spica, Capella, and Sirius are respectively 1.2, 0.2, —1.6. The magnitudes derived from the direct observations of brightness ratio are called *apparent magnitudes*.

One of the greatest scientific achievements of the nineteenth century was the first measurement of the distance of a star. Bessel, Henderson, and Struve made visual observations of the variations in the directions of the nearer stars with respect to the more distant ones when observed at intervals separated by six months. To-day the photographic telescope takes the place of visual observations. The method of measurement is essentially the same as that of the land-surveyor, known as the trigonometrical method. The knowledge of stellar distances enables us to compare the intrinsic luminosities of stars, by calculating how bright they would appear if they were all placed at a

standard distance from the sun. The distance chosen for this purpose is 10 parsecs or $32\frac{1}{2}$ light-years or 195 billion miles. The magnitude of brightness of a star at this standard distance is called *absolute magnitude*. Rigel in Orion is of apparent magnitude 0.3 but of absolute magnitude —5.6, while Capella has absolute magnitude —0.6; this means that Rigel which appears to be a little fainter than Capella is actually 100 times more luminous than Capella. If the sun were removed to the standard distance, its magnitude will become 5; compared with Rigel, the sun is as a candle beside a powerful searchlight.

The very luminous stars are called *giants*; the feebly luminous ones *dwarfs*.

One important characteristic of a star is its *colour*; some are red like Betelgeuse, some white like Vega, and some blue like Rigel. If two stars of the same apparent visual brightness, but one blue and the other red be photographed with the same exposure on the same plate, it will be found that the image of the blue star is very much larger than that of the red one. Thus the sizes of stellar images give an indication of the relative *photographic brightness*. The larger the image the brighter is the star in respect of the light which influences the photographic plate. According to the measures of the stellar images the stars can be graded in order of magnitude called the *photographic magnitude*. The convention is adopted that for stars of the colour of Sirius and Vega, the visual and photographic magnitudes are the same. The difference between the visual and photographic magnitudes is called the *colour-index*, which gives a measure of a star's colour, and therefore, indirectly its temperature. Blue stars are much hotter than white stars, and the latter hotter than red stars.

* For the material for this article, the author is deeply indebted to *Astrophysics* by W. M. Smart,

The stars differ widely in their *temperatures and sizes*. Capella shows the same quality of light as the sun, but is 130 times more luminous and this is due to its immense size which has been estimated to be about 2500 times the size of the sun, a true giant. Similarly among red stars there is an amazing diversity in size between the giants and the dwarfs, with Antares at one extreme having a diameter 450 times that of the sun and at the other extreme very faint stars with diameters not more than $\frac{1}{4}$ or $\frac{1}{5}$ of the sun's diameter.

Mass is another characteristic of the stars. The mass of the sun is about 330,000 times that of the earth, i.e., 2×10^{27} tons. From detailed observations of double-star orbits, it is possible, when the distance of the system is known, to express the sum of the masses of the two stars, and in certain cases the individual masses also in terms of the sun's mass. Such calculations reveal the remarkable and significant fact that the masses of the stars are very much alike, varying from 80 times to $\frac{1}{2}$ of the solar mass, a relatively restricted range, compared with luminosities varying from that of a powerful search-light to the feeble light of a glow-worm.

If we consider the average density of the stellar material, we find again a very great variation. The solar substance is $1\frac{1}{4}$ times as dense as water. Among 'white dwarfs', the average density shoots up as high as 50,000 times the density of water; while at the other extreme, we have giant red stars like Betelgeuse and Antares in which the stellar stuff is 100 times more diffuse than in our air.

2. LIGHT OF STARS.

Two and a half centuries ago, Newton analysed the sunlight into the well known seven primary colours, red, orange, yellow, green, blue, indigo, violet, by means of a prism. We have now an instrument called the

'spectroscope' which admits light through a narrow slit, and by means of a lens and a glass prism enables the light to spread out as a 'spectrum' which can be examined visually or photographed on a sensitive plate attached to a telescope. A spectrum consisting of the succession of rainbow colours is called a *continuous spectrum*. It was noticed, first by Wollaston and later by Fraunhofer, that the spectrum of sunlight contained several dark lines at right angles to the direction of distribution of the spectrum colours. These dark lines are called *absorption lines*. The solar spectrum is not therefore a purely continuous spectrum but an absorption spectrum. There are other spectra called 'bright line spectra' or 'emission spectra' which consist of purely bright lines as when iron is volatilised in the electric arc or a block of lime is heated and their spectrum is examined.

On the results of several spectroscopic experiments, Kirchhoff announced the following laws:

1. A gas under low pressure or the glowing vapour of an element emitted a bright line spectrum varying in the number and arrangement of the lines according to the chemical element.

2. When the light producing a continuous spectrum is passed through a glowing gas or vapour of a lower temperature, a part of it is absorbed by the cooler gas or vapour precisely in those positions of the spectrum where its own characteristic bright lines appear.

Applying the above principles to the dark lines of the solar spectrum, we are led to infer the presence of gases and vapours at temperatures lower than that of the source giving the continuous spectrum. Thus the radiating surface of the sun, called the *photosphere* must merge into the so-called *reversing layer*, producing the absorption lines. Above this is the more extensive but tenuous *chromo-*

sphere, and above it a still more tenuous gaseous envelope the *corona* visible only in a total solar eclipse.

Like the solar spectrum, the spectra of a vast majority of stars are also absorption spectra but with immense variations. The stars are arranged in spectral classes according to what is known as the Draper classification by the letters O, B, A, F, G, K, M, R, N, S. Classes B to M form the main sequence which may be described thus:

B.—Absorption lines comparatively small, mainly due to helium and hydrogen; these are blue in colour.

A.—Hydrogen lines prominent, helium lines absent, faint lines due to metals such as iron, calcium, titanium present. These stars are bluish-white in colour.

F.—Hydrogen lines fainter than in A, metallic lines more prominent. These stars are white.

G.—Similar to the solar spectrum; metallic lines conspicuous. These stars are yellow.

K.—Absorption-bands due to glowing compounds begin to appear; calcium lines conspicuous. These are orange-coloured stars.

M.—Absorption-bands of compounds most conspicuous. Red stars.

It must be noticed that the sequence B to M is a sequence of decreasing surface temperature. The existence of compounds in the red M stars is an indication that there is not sufficient heat in them to break up such obdurate compounds as the titanium-oxide. The surface temperature of these stars is estimated to be about 3000° Centigrade.

In B stars there is little else than hydrogen and helium, indicating extreme high temperature in which no compound can exist as such.

In A Class stars even atoms cannot exist as such. They are ionised, i.e., are broken

up into electrons and protons; thus the non-existence of complete atoms is another indication of very high temperatures in some stars. Again when the spectrum of a B type star is observed visually, the continuous spectrum is most intense in the blue end which accounts for the bluish colour and the red end is faint. Similarly in the red star. According to physical laws, the maximum intensity in the spectrum of a hot body moves from the red towards the blue as the temperature is raised, and to each wave-length at which a maximum intensity occurs corresponds a definite temperature. In this way, it is estimated that a star of spectral class B₀ has a temperature 25000° Centigrade and one of M₀ class, 3000°.

From the study of the spectrum of a star we can now find the absolute magnitude and as the apparent magnitude is easily measured, the distance of the star can then be found.

3. STAR-VELOCITIES.

By means of photographs taken at wide intervals of time, we are able to observe minute changes in the relative positions of stars, which imply that the stars must have also some motion of their own. It is actually found that the stars are moving with amazing speeds averaging to about ten miles per second. If we examine the wave-length of one element of light of a star, we find that at one time it is shorter or longer than at other times. It is inferred from this that the star is approaching or receding from us. Shortening wave-lengths are indicated in the spectrum by a movement of the corresponding lines towards the violet end and increasing wave-lengths by a similar movement towards the red end, the actual amount of displacement depending in a definite way on the ratio of the velocity of approach or recession to the velocity of light. Thus the spectroscope furnishes directly the stellar radial velocity in miles per second,

independently of the star's distance from us. This radial velocity includes that due to the earth's own orbital motion, which can, however, be easily eliminated by taking the mean of the maximum and minimum values of the radial velocity; the difference of the maximum and minimum values gives incidentally twice the earth's orbital velocity, from which we can derive the earth's distance from the sun. The ceaseless movement of the stars suggests that the sun also with the planets must have motion in space. The speed of the sun's motion is obtained by a study of the radial velocity of as many stars as are available in the vicinity of the *solar apex*, the bright star Vega towards which the sun appears to move. The idea is that the average velocity of approach and recession of the two systems of stars, one at the *solar apex* and the other at the *antapex* ought to be equal to the solar motion itself. The solar velocity is about 12 miles per second.

Though the greatest speeds of stars go up to 200 miles per second, especially in stars of spectral class A, the average is about 10-12 miles among the stars of the sequence B A F G K M. Further the inter-stellar distances are so great that the chances of stellar collision are very small in spite of the immense velocities of the stars.

We had occasion to refer to double-stars. Such stars will reveal their duplicity to the telescope only when they are comparatively near and separated by distances comparable with, say, the distances between the sun and Saturn. On the other hand the spectroscope is better able to detect binaries the nearer the two components are in miles. Doubles discovered in this way are called *spectroscopic binaries*. If we photograph their spectrum at intervals during a period, the lines of the spectrum will indicate the velocities of approach and recession, by their fluctuations in position. This shows that

each component of the binary is describing an orbit about the common centre of gravity. The bright star Mizah in the Plough is a visual binary and its brighter component has characteristic doublings of spectral lines indicating its duplicity. A study of the cyclical changes enables us to determine also the ratio of the masses of the components. Thus it is found that stars of the B₀ class are about ten times more massive than the sun, while the masses of the succeeding spectral types diminish. It is believed that spectroscopic binaries are the result of the disintegration of stars on account of their rotation, especially when the rotation speed increases beyond a certain point of safety.

4. VARIABLE STARS.

A variable star is one whose light varies in brightness. These light changes may be periodic with a constant or irregular period, which may be long or short. The different classes of variables are *long period variables*, *eclipsing variables*, *Cepheids*, and *Novæ*. Mira Ceti in the Whale is a well-known long period variable, increasing in brightness from the second to the tenth magnitude and rising again to the third magnitude. The interval between two successive bright peaks is about eleven months.

Eclipsing variables are double stars, which periodically cover each other. A good example of this is the bright star Algol. The Cepheid Variables are regular variables, named after their prototype Delta Cephei. This star has magnitude 3.7 when bright and 4.6 when faint, the rise from minimum to maximum takes 30 hours, while the decline from maximum to minimum lasts 99 hours. The Cepheids are not binaries but are a class of pulsating stars swelling and contracting alternately in a definite manner. A definite

relationship has been discovered between the average magnitudes of these variables and their periods and hence if the distance of any one Cepheid variable be known, all others are thereby determined in absolute magnitude. The distances of clusters and nebulae containing these variables are readily found from the period-luminosity relation. A Nova or temporary star is one that rises suddenly from insignificance to an unusual splendour and drops again to its original faintness. They are fairly numerous near the Milky Way. Though very few novæ are of such prominence as the Nova Aquilæ, the examinations of star photographs show that their average comes to about 30 per year. A nova is believed to be a dwarf star with a surface temperature of about 3000° C., at a distance of a few hundred light-years. During its career through a nebulous envelope acting as a kind of blanket, light-energy of the star is prevented from escaping into space and this imprisoned energy after sufficient accumulation makes the star burst into a brilliant nova and the envelope is torn up as it were. The cause of outburst being thus removed, the star sinks again to its original state. This theory agrees well with the abundance of novæ since dwarf stars and nebulae are equally abundant to account for this phenomenon.

5. STAR CLUSTERS AND NEBULÆ.

Many stars are not lonely individuals pursuing their destined courses in the sky. A large number are binaries, some are triples, quadruples and sextuples. But there are others like Pleiades called *open clusters*, which are a system of stars moving with the same velocity in the same direction. These again form part of infinitely greater aggregations called *galaxies*. More compact

systems of stars are called *globular clusters*, the nearest of them being in Centaurus at a distance of 20,000 light-years and the most remote is about 230,000 light years from the sun. These distances are obtained from the Cepheid variables occurring in the clusters. Many of these clusters have immense diameters and large radial velocities of approach. It is remarkable that the clusters should all lie in one hemisphere of the sky and probably represent the limits of our galactic system of stars, a lens-shaped one with longest diameter 300,000 and shortest 50,000 light-years. The sun is far from the centre of this galactic system.

Nebulae are either *irregular* like the great Nebula in Orion or *regular* like the *planetary nebulae*, the *spiral nebulae* and the *globular* and *spindle nebulae*. The irregular and luminous nebulae are gaseous in substance and not self-luminous but shining by the light of stars in the neighbourhood. Some of these are therefore dark in the absence of neighbouring stars. The spectra of nebulae contain characteristic bright lines which are due to ionised atoms under peculiar density conditions, similar to those observed in the corona.

The planetary nebulae have generally central stars and broad luminous rings, like the king Nebula in Lyra. Their diameters are about 3×10^{11} miles.

The spectroscope shows rotation among the planetaries and bright lines probably due to ionised oxygen and nitrogen.

The *spiral nebulae* are very numerous. They are believed to be flat systems like a lens, since their appearance varies according to the direction in which we view them. The principal features are an extensive bright nucleus and a pair of spiral arms curving round from opposite ends of the nucleus. The spirals are strung with knots of stars

or nebulous masses. It is now generally accepted that the spirals are *island universes* scattered in space. The evidences for this are as follows:

(1) The spirals are found in all parts of the heavens except the Milky Way. This may be due to great obscuring masses in the Milky Way which hide the nebulae beyond them.

(2) Their spectra resemble those of stars of class G, so that the spirals may be really stars or star-clusters.

(3) Their radial velocities are very much greater than those of the members of the galactic system and most of them are receding velocities.

(4) Their distances are of the order of hundreds of thousands of light-years, as for example the great Nebula of Andromeda which is vast system 45,000 light years broad and 900,000 light year distant. Thus the sizes of these nebulae are comparable with our own galaxy.

6. HISTORY OF STARS.

Where do the stars come from and what is their ultimate fate? The diffuse nebulae, dark or luminous, gaseous or dusty, must contract in course of time, become hotter by mutual gravitational attraction and ultimately condense into luminous stars. According to Jeans, the rotation gives the nebulae a flattened shape like a lens, and vast masses of gas are thrown off to form spiral arms, which subsequently condense into stars. As regards the further history of stars after birth, it is presumed that as a star grows older, its development follows the order of the spectral sequence, B A F G K M, which is one of decreasing temperature. The youngest star is supposed to be an enormous red giant formed from the contraction of a nebula. But as this contraction continues, heat energy in the star increases, and surface temperature rises, while at the same time the density also increases. As long as the decrease in brightness due to reduction of surface area is compensated by the increase in brilliance due to higher temperature, the star does not very much change in luminosity. Thus the giant red star develops successively into giants of classes K, G, ... B. Then the

later contractions become increasingly difficult and the star gradually cools and passes from the B class through the Series A, F, ... to M, thus becoming a red dwarf and finally a dark star. This theory accounts for the existence of both giants and dwarfs in each of the classes A to M. According to Eddington, the material of all the stars is in the condition of a perfect gas, *i.e.*, the particles in it are widely scattered. On account of pressure, the density of the interior of a star increases towards the centre and radiation shows that the temperature must also increase with the depth below the surface. The radiation pressure and the gas pressure together combine to produce such a great temperature in the interior of a star that no atom in it can retain its system of electrons. The result is a nearly complete ionisation of chemical elements, so that the individual particles of the stellar material are mere protons and electrons with an enormous freedom of movement like the atoms in a terrestrial gas, whether the stars be the most massive or of least mass. According to calculations, the radiation pressure increases with the gas pressure and is just sufficient to produce light when the mass of a star is about $1/10$ of the solar mass, and becomes too great for the stability of a star when the mass reaches to 100 times the solar mass. It is significant that the masses of stars are observed to lie just between these limits.

Observation and theory confirm the fact that the most massive stars are the most luminous and the least massive least so. Hence according to our theory of evolution of stars, a star must be gradually shedding its mass in its passage from the giant stage to the dwarf stage. This shedding must be only through radiation, and this idea agrees with the relativity theory that mass and energy are identical. Is this loss to a star through radiation compensated? If, as is believed, the radiation is achieved by the annihilation of matter in the interior of a star, all the matter in the universe will, in the fullness of time, be completely annihilated with probably no hope of recreation, unless a new and hitherto unknown process comes into play, condensing radiation back into protons and electrons!

COINAGE OF WORDS.

BY MR. S. KUTTALAM PILLAY,
Mettupalayam.

(Continued from page 376).

WE all know the plural of Man is Men. According to the Arabian, Persian, Greek, Hebrew, Chaldee, Quabalistic, English, Notations, etc., the Intrinsic value of M e n is 5. Hence, according to Anatomy, Men are of five divisions, *vis.*, (1) Rabbit-like, (2) Deer-like, (3) Bull-like, (4) Horse-like and (5) Hermaphrodite.

What does this particular number 5 denote? This particular number 5 denotes that Men should know perfectly well about the fundamental principles of the five religions, *vis.*, (1) Fetichism, (2) Polytheism, (3) Monotheism, (4) Pantheism, and (5) Atheism.

Now, we have accounted for the Intrinsic Value of Man. Hence, the next item to be dealt with is how to account for the Digital Value of Man.

As the digits are ten in number, let us take only ten English words to prove the Digital Value according to the Arabian Notation.

N. B.—To find out the Digital Value, sum up the digits only once. Here, D. V. stands for "Digital Value."

(1) A n n a (Noun)
1 50 50 1. The D. V. is 12.

Hence, "An Indian coin worth 12 pies."

(2) C a d a s t r a l (Adjective)
3 1 4 1 60 400 200 1 30.

The D. V. is 25.

Hence, "Applied to a survey on a large scale like our Ordnance Survey on the scale of 25 inches to the mile."

(3) D a y l o n g (Adjective)
4 1 10 30 70 50 3. The D. V. is 24.

Hence, "During the whole day," *i.e.*, "During 24 hours."

(4) F o o t (Noun)
8 70 70 400. The D. V. is 26.

Hence, "The foot of a man has 26 bones."

(5) G u i n e a (Noun)
3 6 10 50 5 1. The D. V. is 21.

Hence, "An English gold coin worth 21 shillings."

(6) J u b i l e e (Noun)
3 6 2 10 30 5 5. The D. V. is 25.

Hence, "An ordinary Jubilee that takes place every 25th year in the R. C. Church."

(7) Q u a d r a g e n a r i a n (Noun)
3 6 1 4 200 1 3 5 50 1
200 10 1 50. The D. V. is 40.

Hence, "One who is 40 years old."

(8) R e p i q u e (Noun)
200 5 80 10 3 6 5. The D. V. is 30.

Hence, "At piquet, the winning of 30 points, before playing begins."

(9) S e p t i l l i o n (Noun)
60 5 80 400 10 30 30 10 70 50.

The D. V. is 43.

Hence, "The least number of 43 digits."

(10) T r i c e n n i a l (Adj.)
400 200 10 3 5 50 50 10 1 30

The D. V. is 30.

Hence, "Occurring every 30 years."

Now, what is the Digital Value of Man? The Digital Value of Man is 10. What does this number 10 denote? This number 10

denotes that Man is of 10 kinds, *viz.*, (1) Man of the world, (2) Man of hands, (3) Man of business, (4) Man of letters, (5) Man of War's man (6) Man about town, (7) Man of the street, (8) Man of sin, (9) Man stealer, and (10) Man of straw.

What does this particular number 10 signify? This particular number 10 signifies that Man must have 10 powers (*Satwam* 10). Moreover, when the literature is to be accounted for, we can account for the word Man in 10 ways according to the Digital Value, *viz.*, (1) A human being, (2) A male attendant, (3) A man of war, a ship, (4) A full grown up male, (5) One possessing a distinctively masculine character, (6) Mankind, (7) A husband, (8) A piece used in playing chess, (9) To supply with men, and (10) To strengthen or fortify.

What does this particular number 10 denote? This particular number 10 denotes that Man must know the use of ten kinds of Yogas. (*Yogam* 10).

Even according to the Pythagorean system, $M = 4$, $a = 1$, and $n = 5$. Here also the Digital Value is 10. Accordingly, we have accounted for the word Man in ten ways. But according to the Roman system, the Digital Value of *M a n* is 11. Hence,

100 0 90

a eleventh meaning is added to the list, that is, (11) A word of familiar address.

What does this particular number 11 indicate? This particular number 11 indicates that Man must know well about the 11 *Karanams* (*Karanam* 11).

Now, we have accounted for the Digital Value of Man. Hence, the next thing to be done is how to account for the Numerical Value of "Man".

One word is quite adequate to prove the Numerical Value of words according to the Arabian Notation. For, from a single instance, you may infer the whole.

N. B. The Numerical Value is nothing but the "Actual Value." Here, N. V. stands for Numerical Value.

M a o m m e t i s
40 1 70 70 70 5 400 10 60.

The N. V. is 666.

Hence, "Maommetis is a Greek word, purposely coined to represent Mohammed by the Mystic Number 666, according to the Arabian Notation, to show that He is one of the Great Reformers."

Now, what is the Numerical Value of Man? The Numerical Value of *M A N* is 91

40 1 50

according to the Arabian, Persian, Ibraic Notations, etc. What does this number 91 denote? This number 91 denotes one who is 91 years' of age only, is fit to be called a long experienced Man.

What does this particular number 91 announce? It announces that Man (Mankind) is divided into 91 castes according to the *Shastras* of our ancients (Castes 91).

Again, the Numerical Value of *M* is 40. We know that at the age of forty, a man is called a quadragenarian as already explained. At that particular age only, he is fit to be called "a man of the world," *i.e.*, "one accustomed to the ways and dealings of men." Moreover, the value of the word Man, even according to the Tamil Numerology, is only 40.

What does this particular number forty mark? It marks that only 40 drops of blood of a man make one drop of semen; only 40 winks are necessary after the dinner to take a short nap; only after 40 days' experience, a

man becomes the master of a certain habit; and a man must fast 40 days in order to get the Wisdom of God. Generally, it is said, the fortieth year of a man is very auspicious.

Then again the Numerical Value of the letter *A* is 1. And therefore, $M + a$ or $Ma = 40 + 1$ or 41, is the age of a man who is to be purified to sacrifice himself as a philanthropist and to be altruistic like our Mahatmaji.

And then again, the Numerical Value of the letter *N* is 50. And therefore, $Ma + n$ or $41 + 50$ or 91 is the age of a man who is fit to give very good advice to his fellow-citizens to take the royal road.

Finally, according to the English Notation, the Numerical Value of the word *M a n*

13 1 14

is 28. What does this number 28 denote? This number 28 denotes that a man must have a thorough knowledge of the 28 *Sivagamams* (*Sivagamam* 28) before the expiration of his twenty-eighth year as the first letter *M* of Man stands for Mahadeva or Siva as already explained.

The English word Man, it seems, is from Dutch.

Even when the Cabbala is to be accounted for, the word Man which is made up of three letters informs us that Man is divided into three parts, *viz.*, (1) the body, (2) the soul, and (3) the spirit.

What does this number three denote? It denotes the three dances (1) Creation, (2) Preservation, and (3) Destruction.

Now, the word Man speaks to us very humorously, saying "If you want to become a Man, go directly to the 'Apothecary,' at the house of 'Understanding,' next door to 'Reason,' in the 'Prudent Street,' in the town of 'Longevity.'"

HIS PRESCRIPTION FOR MAN.

Take, 40 years' Minute Observation,
1 year's Devotion,
and 50 years' Altruism.

Compound all these three, and set over the bright fire of "Action," sweeten it with the sugar of "Energy," skim it with a spoon of "Duty," and swallow it. Let it remain there till the expiration of your ninety-first year. You will get Wisdom. And then you will be restored to a well experienced Man.

Now, we have accounted for the Numerical Value of Man. As every letter is denoted by certain numeral as already explained, and it is under the direct control of a certain planet according to Numerology, the next problem to be solved is how to account for the astronomical calculation of Man.

When the astronomical calculation of Man is taken into consideration, we understand that a Man is a microcosm of the macrocosm. Hence, he must have (1) patience and (2) creative activity as our mother, the earth has.

The 'M' of Man is under the direct control of the planet Rahu (Dragon's Head) which causes eclipses of the sun and moon. Rahu being a shadowy planet (*Ra* = the Sun, and *Hu* (Ku) the Earth, that is, from the Sun to the Earth) makes a Man to undergo a great deal of trouble when it is not well associated. But when Rahu is about to leave a man, it makes him healthy and wealthy, strong and courageous. When it is well associated, it makes him a guardian of many.

The 'a' of Man is under the direct control of the planet Sun which is the source of light and heat to our planetary system. Hence, the Sun makes a Man shine, and cures him as his

body exposed to its rays. It makes him a musician as it is the God of Music. As it is the Governor of Singha Rasi, it gives him honour, enjoyment, royal favour, happiness, money, gain of virtue, and all other prospects when he is well associated.

The 'n' of Man is under the direct control of the planet Budha (Mercury). Hence, it makes a Man the messenger of God and God of merchandise, spiritfuf and active, and gives him information from every nook and corner of the globe, and keen sense when he is well associated.

Now, we have accounted for the astronomical calculation of Man.

As astrology is nothing but the calculation taken from his cousin astronomy, the next problem to be solved is how to account for the astrological calculation of Man.

'M,' or the planet Rahu foretells that Man can obtain the knowledge of (1) the universal creating fluid, (2) the soul of the universe (even our mind, the thinker, which can produce a certain daughter called Wisdom, is only a ray from that World Soul), (3) divinity, and (4) he will always have some conclusion of matter in hand.

'A,' or the planet Sun predicts that Man can overcome all his enemies, can shine like the Sun and be fruitful when his star reaches its zenith.

'N,' or the planet Budha foretells that a man could be quick in thought and decisions and he could try to obtain keen sense. He could try to carry out his plans and aims throughout the length and breadth of the globe on all times. He could know well about the universal vivifying force, the universal life, and the primal substance. And moreover, he could be energetic and doing actions always.

Now, we have accounted for the astrological calculation of Man.

As every planet has a different colour, and colours play the most important part in all creations, the next problem to be solved is how to account for the colorific representation of Man.

The 'M' of Man is under the direct control of Rahu whose colour is violet. Hence, it symbolises that Man is a being who is always seeking after truth. "The love of truth, and truth of love" must be his motto.

The 'A' of Man is under the direct control of the sun whose colour is orange. Hence, it signifies that Man must be fruitful.

The 'N' of Man is under the direct control of Budha whose colour is slaty blue. Hence, it announces that Man should try his utmost to preserve his health which is the basis of all social virtues.

Now, we have proved that the word Man is hieroglyphic, hieratic, phonetic, numeric, astronomic, astrologic, colorific as well as symbolic.

From the above explanations we can conclude that hieroglyphic and hieratic representations show the shape of the script, creating ideology and symbolism.

Phonetic representation tells us of orthoepy and symbolism, and reveals to us that Man with the help of God, can get life eternal.

Numeric representation assures us of the true account of the script. For, etymology means true account. At least the seven terrestrial sciences as well as the seven celestial sciences should come under the head of numerology. If not, they will not be treated as sciences. Simply we have to take them as imaginations and suppositions, or illusions and delusions.

Astronomical and astrological calculations inform us of the status.

Colour raises rank.

And symbolism which is the dominant feature of the Hindu religion reveals to us the hidden truth or fact philosophically.

Moreover, everybody should know that coinage of words is otherwise called *Akkara-lakkanam* who is the *Abba* or Father of all arts and sciences. When there is no *Abba* or father, how can we account for children? Hence, arises the necessity for us to learn this science very minutely.

"In olden times, hieroglyphics, phonetics and symbolism were taught in each and every

school in India without exception. "And there was no school without a board," so says Champolian.

Some of you may ask, "Mr. Pillay, how to develop this further?" The only answer Mr. Pillay can give to this question is, the most intellectual men can develop this further. But Mr. Pillay does not want to go beyond the subject taken. Some how or other, let us try to proceed with this further in the correct path.

As 'm,' the first letter of "Man," as a small character, represents "Wisdom," and a real man also must be a man of "Wisdom," the next problem to be solved is how to account for the coinage of the word "Wisdom."

(To be continued.)

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THE MERCHANT OF VENICE—DIFFERENT IDEAS OF THE VALUE OF WEALTH.

BY MR. T. KRISHNAMURTI, B.A., B.ED.,
Chodavaram.

'THE more we go through, the more we see in Shakespeare.' The German critic Gervinus regards the "Merchant of Venice" as illustrating different ideas of the value of wealth. Other critics take this play as an attack on the practice of usury.

The conceptions of the various characters vary with regard to wealth. Shylock to a great extent personified miserliness. Jessica, by a natural reaction, punished the miserliness of her father by a childish wastefulness. Antonio was an emblem of magnificence and generosity. Portia's wooers had bitter experiences from a shallow view of the comparative values of things. Bassanio was an instance of the most difficult kind of high-mindedness. The play illustrates the contrasts between the show of things and their reality.

In Act I, scene 1, Antonio was represented to be a rich man, Salarino speaking of him, 'There, where your argosies with portly sail, Like signiors and rich burghers on the flood, or, as it were, the pageants of the sea, Do overpeer the petty traffickers, That curtsy to them, do them reverence, As they fly by them with their woven wings.'

Bassanio was at first presented as a prodigal. He confessed to Antonio—

'How much have I disabled mine estate,
By something showing a more swelling port
Than my faint means would grant continu-
ance.'

He was portrayed as heavily involved, and he spoke thus to Antonio before divulging his love for Portia.

'But my chief care
Is to come fairly off from the great debts
Wherein my time something too prodigal
Hath left me gaged. To you, Antonio,
I owe the most, in money and in love,
And from your love I have a warranty
To unburden all my plots and purposes
How to get clear of all the debts I owe.'

Antonio's magnanimity and staunch friend-ship were depicted in the lines—

'And if it stand, as you yourself still do,
Within the eye of honour, be assured,
My purse, my person, my extremest
means,
Lie all unlock'd to your occasions.'

Then Bassanio unfolded his love-suit for the rich lady Portia. In approaching him with the request of a loan, he said :—

'O my Antonio, had I but the means,
To hold a rival place with one of them,
I have a mind presages me such thrift,
That I should questionless be fortunate!'

Antonio had no money with him for the time being, so he asked Bassanio to raise a loan at any risk.

In scene 2, Nerissa represented Portia as an abundantly rich lady, and remarked, 'they are as sick that surfeit with too much as they that starve with nothing.....superfluity comes sooner by white hairs, but competency lives longer.'

Scene 3 presents the greedy Shylock. Bassanio asked him a loan of 3000 ducats for Antonio. Shylock at first saw whether he had the requisite means to repay his debt, and at last consented. Here Antonio was presented

as one that abhorred interest. Shylock belonged to the race of usurers, and Antonio, the condemner of usury, and Shylock, the worshipper of usury, became natural enemies. Here Antonio was prepared 'to break a custom to supply the ripe wants of his friend.' Though he never took or gave interest, he was ready to pay interest to Shylock. Shylock cited Scripture in support of interest. Antonio contemptuously spoke of interest as 'a breed for barren metal.' Shylock at last promised to lend the amount and 'to take not doit of usance.' Antonio executed the perilous bond in spite of Bassanio's protests. He said :

'You shall not seal to such a bond for me :
I'll rather dwell in my necessity.'

In Act II, scene 2, Launcelot Gobbo spoke of Shylock :—'I am famished in his service ; you may tell every finger I have with my ribs.' In scene 3, Jessica's lavishness was first exhibited in her freely giving away a ducat to the departing Launcelot. In scene 5, Shylock remarked about Launcelot :—

'A huge feeder ;
Snail-slow in profit, and he sleeps by day
More than the wild-cat : drones
hive not with me.'

Bassanio was presented as one who would waste his borrowed purse. In scene 7, Jessica quitted the house of Shylock for ever with a lot of money.

In scene 7, the Prince of Morocco had a high conception of gold saying,

'Never so rich a gem
Was set in worse than gold.'

In scene 8, Shylock's greed was exhibited in the lamenting lines :—

'A sealed bag, two sealed bags of ducats!
Of double ducats, stolen from me by my
daughter!
And jewels, two stones, two rich and pre-
cious stones,
Stolen by my daughter ! justice ! find the
girl ;
She hath the stones upon her, and the
ducats.'

Act III, scene 1, presents Shylock as the type of Mammon-worshippers. His grief for money was primary, and that for his daughter was secondary. In his conversation with Tubal, another of his tribe, his love for money was shown in several ways. Jessica's lavishness also was illustrated. First he began to lament for his ducats and stones. He remarked : 'I would my daughter were dead at my foot, and the jewels in her ear ! I know not what's spent in the search : why, thou loss upon loss ! the thief, gone with so much and so much to find the thief' Jessica's lavishness was mentioned in her spending at Genoa in one night four score ducats. She also gave away a ring for a monkey. Thus, by a natural reaction, she punished the niggardliness of her father. She childishly wasted money, flung it about, and exchanged rich things for trifles.

In scene 2, Bassanio in choosing the right casket, showed his supreme contempt for money. He remarked : 'The world is still deceived with ornament.' He called gold, 'thou gaudy gold, hard food for Midas.' Portia had the just view of wealth. She took it as mighty help to pleasurable living. She valued friendship and love more than wealth. For friendship, she freely gave her wealth, nay she even hazarded. She did not care to have too much of it. When she heard of Antonio's danger, she showed her dignity in saying,

'Pay him six thousand, and deface the bond;
Double six thousand, and then treble that,
Before a friend of this description
Shall lose a hair through Bassanio's fault.'

In Act IV, scene 1, the famous trial scene, Shylock, for a time suppressed his love for money, and the idea of wreaking vengeance on Antonio was foremost. For this his only venue was the fulfilment of the letter of the law. He did set aside equity. He ignored the spirit of the law. He made up his mind to stick up to his bond. The persuasions of the Duke were of no avail. He flatly refused Bassanio's offer of six thousand ducats.

Portia's famous lines on Mercy were in the case of Shylock thrown to the winds. Bassanio's free and ungrudging offer of even ten times the money could not shake his determination and alter his purpose. He stubbornly replied:—

'I crave the law,
The penalty and forfeit of my bond.'
Thus he was a totally transformed man.

When Portia finally told him,

'Take thou thy pound of flesh:
But, in the cutting it, if thou dost shed
One drop of Christian blood, thy lands and
goods
Are, by the laws of Venice, confiscate
Unto the state of Venice,'

his hopes were frustrated, and ultimately ended in disappointment and regret. The old fiend, avarice, 'the offending Adam, whipped out of him' for a while, again had full mastery over him, and he demanded nine thousand ducats, which huge sum Bassanio readily offered. Portia objected to the payment, and strengthened and stiffened the judgment by pronouncing,

'Nor cut thou less nor more,
But just a pound of flesh: if thou cut'st more
Or less than just a pound, be it but so much
As makes it light or heavy in the substance
Of the division of the twentieth part
Of one poor scruple, nay, if the scale do turn
But in the estimation of a hair,
Thou diest, and all thy goods are confiscate.'

He deplored when his bare principal was denied him.

His punishment was further enhanced when Portia declared:—

'The party 'gainst which he doth contrive
Shall seize one half his goods; the other half
Comes to the privy coffer of the state;
And the offender's life lies in the mercy
Of the Duke only, 'gainst all other voice.'

The Duke pardoned him before he asked for it. Shylock, who regularly worshipped money, could not reconcile himself to his lot, and said:—

'You take my house when you do take the prop
That doth sustain my house; you take my life
When you do take the means whereby I live.'

Antonio showed his generosity in saying—

'So he will let me have
The other half in use to render it,
Upon his death, unto the gentleman
That lately stole his daughter.'

He further added,

'Of all he dies possess'd,
Unto his son Lorenzo and his daughter.'

Bassanio and Antonio, giving a major place to gratitude, and a minor one to money, offered Portia in the guise of a lawyer three thousand ducats. Portia magnanimously replied:—

'He is well paid that is well satisfied;
And I, delivering you, am satisfied
And therein do account myself well paid;
My mind was never yet more mercenary.'

Portia's wooers were taught that 'all that glisters is not gold.' They also realised that 'folly and death lie under precious metals.'

Thus the various characters had various views of wealth, and their experiences vary. Though vice seemed to triumph, the triumph was only ephemeral, and ultimately it was ruined. Though virtue was tortured, it was only a trial and test, and it won in the end. Persons who put money to magnanimous use, were immensely rewarded, and persons who hoarded it for its own sake were ultimately ruined and humiliated. These and other morals drawn about money are true to life.

THE MINIATURE DEPARTMENT OF EDUCATION.

By Mr. D. PURUSHOTHAM, Chittoor.

INTRODUCTION.

WHAT is a library? A library is an institution devoted to the collecting, conserving and exploiting of literature and of making it accessible to all scholars. It is like a brain centre catering to all tastes. It is a healing place for the soul, and a laboratory of the Art student. The heart of a library is not a Chinese box cunningly divided into compartments, but is a true mirror of the best brains of the universe. A boy once said to his teacher, "you have taught me the most wonderful thing in the world—to read books." It is a place of continual surprise, adventure and growth. There is always a continuous inflow of precious knowledge through books, thus creating a surprise in the matter and growth of thought. New experiments and inventions cause an adventurous spirit of research which develops and enlarges the aggregate growth of knowledge. It creates a reading habit. Anyhow a library cannot be a luxury, but a dire necessity.

PIONEERS OF THE LIBRARY.

Who are the pioneers of the library system? Men like Lucullus lavished money on libraries, until Seneca spoke bitterly of books as "ornaments of dining room," reaching to the ceiling. He added that a present library takes the rank with a bath room as a necessary ornament to a house. In England Andrew Carnegie, since 1887 financed and presented buildings for libraries. At present philanthropists like Lord Nuffield are helping the cause of the libraries.

Babylon and Assyria were literary centres where ten to thirty thousand inscribed clay

tablets were preserved. The hieroglyphic writings of Egypt never supplanted the cuneiform of Babylonia as the language of culture. The Papyrus plant which furnished food, fuel and clothing for Egypt became the fragile medium for perpetuating their writings, until parchment or prepared skins came into use. From Ephesus, where we are told, there was a book chained to the door of Diana's temple, came Zenodotus to manage the Alexandrian library. C. Assinius Pollio founded the first library in Rome from the spoils of his Illyrian campaign in B.C. 39. Pliny calls him "the first to make men's talents public property," but Plutarch claims this honour for Lucullus.

During the middle ages, Bishop Alexander's library at Jerusalem (A. D. 250) was a storehouse of knowledge. St. Benedict perfected the library administration and his successors influenced the government of the College libraries also. Becker estimates that from 750—1200 A.D. there were 136 libraries in monasteries, with about 12000 books in all. So it is clear that once the libraries were for the highest rulers and the selected missionaries. Then, slowly, this private privilege has been extended to one and all. At Pembroke College, the titles of books were written on parchment attached to the left half of a board. The right half was covered with a thin layer of wax, on which the name of the borrower might be scratched in line with the book's title. The borrower deposited "a pledge" sometimes the value of the book or an agreement in writing. The Vatican library at Rome has historic origins in church records dating from the second century. The British Museum came into existence in 1759 A.D.

KINDS OF LIBRARIES.

Libraries are of many kinds, *viz.*, Public Libraries; College or School Libraries; Rural Library; Travelling Library, etc. The school library provides information, provides reading for recreation and trains the pupils to use the books profitably. The lack of suitable libraries is mainly responsible for the lapse into illiteracy of pupils, who after completing their primary or elementary school course return to their homes. School libraries were established in France (1792), Spain (1869), Austria (1870), Italy (1906) and in England (1908).

In our country, at first there were no books, but everything was inscribed on rocks and exhibited in all public places. In our good old temples, practically all the stones are dressed with the events of the past. Taxila at the beginning of the Christian era; Ujjain in the early centuries of that era; Ayodhya, Nalanda and Pataliputra during the Gupta period; Benares, Sringeri (Mysore State) and Nadia (Bengal) afterwards, were really the centres of learning.

To flood a library with shop-soiled books, third or fourth rate novels, either in the form of presentation copies or specimens, is something like making it a lumber room. Most books are not worth reading, many books are just dull and some alas! are dull, but have to be read. The present school libraries are becoming unsuitable nurseries, as they are stocked with the infamous characters in fact and fiction. The pupils should be provided with three kinds of books, *viz.*, books on nature study, citizenship and stories leading to morals and general knowledge. If the old books are not at least converted into pulp, they are sure to do more harm than good. We may get hundred per cent. out of our reading and if the pupil gets

at least fifty per cent. and if that is his own, it has its real worth. So far as the educational capacity is concerned, the present day literates stand in the same level as those who filled our old pial schools half a century ago, *but under very different conditions*. In those days, a stay of eight years at a pial school and four at Nalanda made a youth a gentleman and a scholar of real merit. In the libraries, many diverse books have flashed and faded which made the majority lack intelligence and adaptability to modern usage and conditions. "There are," said one sage, "only three books in the world which are necessary for anyone to read—the Bible, the Hymn Book and the Almanac, and therefore he was opposed to all libraries."

The task of a school is to make the boys learn how to study. And true study is accomplished for most pupils in libraries. In writing books, say on history, unbalanced judgment is not very easy. Reading of such topics as the present history of the world, elements of political philosophy, economics and laws of health may lead one to self-education crowning the highest and purest pleasures possible to man. Such books are essential, but they must also be made accessible and available.

WHO ARE TO WRITE BOOKS?

In Soviet Russia, writers are compelled to get license confirming their right to occupy themselves with literary work and to renew it once in six months. In the fair name of education, our benign government has not enforced such unthinkable rules in our land. We have to consider the suitability of the subject matter and its adaptability in teaching to honour and glory the men of the soil, industry, art and science. A book is an outpouring of one's inner feeling, experience

and knowledge. It is involuntary. Only such kinds of books do real good and help humanity, and not books got up for the market which are mostly useless. Well experienced and promising educationists of various grades may be deputed to study the progress of education in the well-advanced countries and then books might be written suitable to the changed Indian conditions. The educationists are so busy with their own work that they find little or no time to think over the question of books or launch a new daring experiment. We know that experimentation in India does not pay as in other countries. The good thinkers of the library question are quite willing that some one else should try any experiment first.

For any course three sets of books may be prescribed. The first set is for the independent student who undertakes to read through and with care; the second set is recommended to be read by those who desire to extend their study; and the last set should be for consultation. We find too much of scissors and paste in the way of compilation from others. This 'walking on parts' may lead us nowhere. In America, there is a popular series, all written by the pupils whose ages are between ten and sixteen. A sincere attempt may be made in that line also. It is true publishers would not accept such books, which do not fit the same old mould. In that case, the State may publish the same. Let us not produce boots at hazard without looking at the feet that have to wear them. There should not be one kind of general books but many. The pupil's selection of a book is almost like that of a conjurer's victim who draws a card, the artist has declined to force on him. The Text-Book Committees have to be dissolved for sometime to come. At least some of

the booksellers are like sitters on safety valves.

PUBLIC LIBRARIES.

As the libraries are supported by the rate-payers, the books should be necessarily such as the average rate-payer would be likely to appreciate. These are the necessities and the rest luxuries. If refuse be popular and in demand, it must be supplied and such refuse must be reduced to the minimum possible slowly. Would I be inviting your criticism, if not actual disappointment when I say that the average rate-payer is not at all benefited, and that more than seventy-five per cent. of the library grant is expended in catering to the tastes of the few loungers, whose reading is entirely confined to light novels. At present many seek recreation by the 'Shilling or Penny' series, journals and comic rags, which contain unmixed evils—romance and sensation. They do encourage the habits of reading for the mere purpose of killing time, and some do inflame their passions and imaginations ending in a disturbed state of affairs. Books and journals are roaring with murders and they are also justified and there is ample testimony of the demoralization caused by the perusal of such literature—never intended for youths—and which but for the booksellers would not have come into their hands.

There are two methods of forcing the readers into accepting a good idea. Firstly, to introduce it through legislation and secondly to make it desirable through education. For the re-education of adults, Reading series, Doing series, still Brighter Vernacular series, and Readers without tears, suitable to establish a sort of moral equality, and make them rejoice in their own labour are imperative. These should be printed on good paper and artistically bound. The

readable books may be classified as follows: Every librarian should have to be a master of the library science. He should blindly believe that he must find a reader for every book and provide a book for every reader and that he should bring the book and the reader together. We have seen our readers brouse, skip, glimpse, discard and non-plus-ed when taken to a library, as they receive little or no help from the library staff. Better we have a few books and a good librarian. At least once in a month, a library guide may be published prescribing the books to be read, containing a complete introduction and synopsis of each book, together with a commentary and notes on difficult points. Let us try.

LIBRARY STAFF.

While a good stock of books is the first requisite, personal service of the right kind is the second. The ideal of book preservation should give place to the ideal of service.

TO SUIT LATEST SYLLABUS ELEMENTARY SCIENCE

*Prepared in accordance with the latest syllabus in the subject for the
A Group of the S. S. L. C. Examination.*

PHYSICS

By V. N. VISVANATHA AIYAR, M.A., L.T.,
Lecturer in Physics, Govt. Muhammadan College, Madras.

CHEMISTRY

By P. A. NARAYANA AIYAR, M.A., L.T.,
Additional Professor of Chemistry, Presidency College, Madras.

NATURAL SCIENCE

By K. C. RAMASWAMI AIYAR, M.A., L.T.,
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Part II for Forms V and VI. (Specimen copies sent on request.)

Part I for Form IV and a Tamil Edition in active preparation.

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SRI P. A. SUBRAMANIA AIYAR, B.A., L.T.

SRI P. A. Subramania Aiyar, the well-known Headmaster of the Hindu High School, Triplicane, has, it is learnt, taken leave preparatory to retirement. Born 58 years ago of a respectable and cultured family in the Tanjore District, Sri Subramania Aiyar had his University education in the St. Joseph's College, Trichinopoly. He chose the teaching profession as his vocation and after a short period of service as an assistant became the Headmaster of the S. M. High School, Shiyali. He shifted his scene of activities to Tenali where he served as the Headmaster of the Taluk High School till May 1916. It was then that Sri Aiyar was appointed to take charge of the Hindu High School. Sri Subramania Aiyar joined the school, the reputation of which had been built up by such eminent men as the late Messrs. G. Subramania Aiyar, K. B. Ramanatha Aiyar and Mr. (now Right Hon'ble) V.S. Srinivasa Sastri. It was an era of prosperity in the country when the charge of the school fell into the hands of Sri P. A. Subramania Aiyar. The strength of the school rose year after year till in the year of his retirement it has reached nearly 2,000 (from the Third Standard to the Sixth Form). To all the seventy masters and the pupils of the school Sri P. A. Subramania Aiyar has been a trusted friend and unfailing guide. He has slowly built up a reserve fund for the school, acquired two spacious buildings for housing certain forms of the school. He is a very strict disciplinarian and an impressive teacher.

A good teacher, an erudite scholar and a careful administrator, his activities were not confined to the school. He was nominated a member of the S. S. L. C. Board and was Chief Examiner in English for the S. S. L. C. Examination. He was an elected member of the Madras District Secondary Education Board in the days when all teachers in non-mission boys' schools had one representative on that body. He served on the Senate of the Madras University for three terms as the representative of the Heads of Secondary Schools of the Madras University area. It was through his efforts that the University has permitted *bona-fide* teachers to appear for the University Arts Examinations as private candidates without the production of attendance certificates. As the convenor of a committee he was responsible for the preparation of detailed rules regarding the maintenance of accounts in the University.

In the earlier years of his service in Madras, Sri Subramania Aiyar was actively associated with professional organizations like the Madras Teachers' Guild and the South India Teachers' Union. He was the President of the former for a number of years and the Secretary of the latter. He presided over the S. I. T. U. Conference held at Kumbakonam in 1922. He was one of the founders of the S. I. T. U. Protection Fund and the Madras Teachers' Guild Co-operative Society.

We wish Sri Subramania Aiyar many happy years of perfect health and peace.

APPROVED

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COMMERCIAL EDUCATION IN EGYPT.

By MR. H. WILLIAM ANGLIKER, M.Com Sc,
Faculty of Commerce, Egyptian University.

THE "PRIVATE" SCHOOLS OF COMMERCE.

THE initiation of commercial education in Egypt was due to the private enterprise of Nematallah Bey, who established a small evening section in 1900 in Cairo. Between 1907 and 1932 ten other good private commercial schools were founded in Cairo and Alexandria. With one exception, these are full-time day schools. These private schools are run by the various foreign communities and religious bodies in Egypt. They provide for examinations and issue certificates independently of the Egyptian Ministry of Education, which as yet exercises no control over them.

The language of instruction in each school is that of the foreign community on which it depends; and, naturally, the examinations prepared for are those of the respective European countries—the British schools catering for the London Chamber of Commerce and Pitman's Examinations, the Italian schools for the recognized State Commercial Examinations of Italy, and so on. But the predominating influence is French, as a knowledge of French business methods and language is essential in Egypt. All the schools take this into account; and so the examinations of the *Société de Comptabilité de France*, the *Institut Sténographique de France* and of the French Government—the *Diplôme Supérieur d'Etudes Commerciales*, particularly—are the chief influence on the courses of study followed by the "private" commercial student. The period of study is normally three years, and the weekly hours vary from 30 to 37.

Up till 1935 the average age of the pupils of these schools was lower than in the Government commercial schools. Thus, the thorough training given in foreign languages, and the type of pupil frequenting the private commercial schools, have hitherto given to the product of these schools a preference in business circles over that of the Government schools. How the latter are attempting to face this formidable competition will be explained later. The private commercial school lays great stress on collaboration between school and family, and on retaining the interest of "old boys" in their several schools. In 1934 about 260 graduates were turned out by the private schools of commerce and all were easily placed in situations. In the future there is likely to be an increase in private evening commercial schools and courses due to the recent policy of contraction in respect of the Government evening commercial schools. The total number of "private" commercial pupils is about half that of the Government commercial schools. The figures from the most recent issue of the *Statistique Scolaire—1933-34*—are:—

	M.	F.	Total.
Foreign schools ...	1,368	137	1,505
Government schools ...	2,919	118	3,137

THE GOVERNMENT SCHOOLS OF COMMERCE.

As in private, so in Government, education in Egypt, a start was made by establishing evening classes; but not until 1910. It was then felt that the needs of Egyptian employees and business men in a small way especially demanded this step. By 1926,

therefore, the Ministry of Education, in collaboration with the Provincial Councils, had established throughout Egypt fourteen evening schools with 1,087 students comprised in 125 classes. But the real peak of Government evening commercial school progress was attained in the school year 1930-31, when two girls' sections were established and the statistics showed nineteen schools (counting the girls' "sections" as separate schools), 1,758 students (1,655 boys and 103 girls) and 301 classes. Then ministerial views changed, and a policy of contraction supervened. The result was a rapid reduction of schools and classes, until in 1934-35 the figures show only three boys' and one girls' school with 169 and 89 students respectively, and a total of 49 classes still further reduced in 1935-36 to 36 classes with a total attendance of 192 students, comprised in one boys' and one girls' school.

The official reason for this contraction policy was the competition for employment of the evening school graduates with those of the Government day commercial schools. In relation to this, however, the last official record of the positions occupied by students (males only) attending the Government evening commercial classes in 1932-33 shows that 68 per cent. were employed: 27 per cent. in Government offices and 41 per cent. in businesses. The present Government commercial education system is, therefore, really a whole-time pre-employment one, carried on in five "Intermediate Schools of Commerce," two of which are in Cairo, one in Alexandria and the others in the provinces. Since the beginning of the school year 1935-36 the syllabuses and time-tables of these schools have been reorganized, and in Cairo two special sections have been started: one in

which the language of instruction in all subjects (except, of course, Arabic language) is English, and the other in which it is French. In this way, and with a lower entrance age, it is hoped that a type of graduate will be produced equal, if not superior, to that produced by the private commercial schools.

The subjects in the "standard" and "special" sections are the same, with appropriate adjustments in the relative foreign language hours in the English and French sections referred to. These subjects are Arabic Language, English Language, French Language, Arabic Handwriting, English Handwriting, Modern History of Egypt, Physical Geography, Economic Geography, General Economic and Commercial Knowledge, General Arithmetic, Book-keeping, Arabic, Algebra, Geometry, Commercial Arithmetic, English and French Business Training, Arabic and European Typewriting. A four years' course comprises these nineteen subjects, the weekly number of lessons being 34 of 50 minutes each.

Intermediate school entrants must hold the Primary School Certificate of the Egyptian Government. They are accepted in order of merit, according to their marks in Arabic Language, English and Arithmetic. At the end of the course the successful student in the final examination is given an Intermediate Diploma in Commerce, which qualifies him for minor Government posts, mainly clerical. Some of the local banks also recognize this diploma when appointing clerks; but it is now the Government's object to supply and encourage candidates for business posts—an object likely to be achieved if the encouraging reports of the last two years' work in the "special sections" are ultimately borne out.

Until the beginning of the 1935-36 school year the higher branches of commercial education were covered in the syllabuses of the Higher School of Commerce, Cairo. This school was recruited from holders of the Government Secondary School Certificate Part 2, "Literary" or "Scientific" Section, though preference was given to those in the latter section. The subjects studied were Modern History, Economic Geography, Commercial Mathematics, Accounting and Auditing, Business Training (Arabic, English and French), Economics (including Finance and Statistics), Law (Civil, Commercial, Maritime and International), English and French Business Training, the language of instruction was Arabic. In contrast with the Intermediate Schools of Commerce, the higher school course was mainly theoretical, though in Arabic, English and French Business Training the practical aspect was provided for. After a four years' course, the final examination entitled the successful student to a Higher Diploma in Commerce. This qualified him for posts in the Government Departments leading to administrative work, for positions, ultimately, of responsibility in local business concerns, and for teaching in the Intermediate Schools of Commerce. In 1934-35 the students of the Higher School for Commerce numbered 1,335.

The Egyptian University absorbed the higher school as from the beginning of the session 1935-36. It is now the Faculty of Commerce. The new Faculty admits of specialization in the third and fourth years, in which there are two sections—"Commercial" and "Economic"—each comprising compulsory and optional subjects arranged with due regard to the educational

object of each section and following the lines and standard of similar European institutions. An interesting and helpful feature of these years is that, in addition to the foreign language lectures, certain of the technical subjects are lectured on in English and French. This enlightened policy will undoubtedly encourage original research work by Egyptian students and lead to the building up of a truly Egyptian scientific literature.

Leading up to the third year, the first and second year subjects (all compulsory) are (first year) Economics, Introduction to Civil Law, Economic History, Commercial and Financial Mathematics, Economic History, English and French Languages; (second year) Economics, Commercial Law, Economic Geography, Financial and Pure Mathematics, Accounting, Commercial Technique, English and French Languages. The successful student is granted a B. Com. Degree at the end of his four years' course; and post-graduate courses will be instituted for students wishing to qualify for the M. Com.

The disappearance of the Higher School of Commerce has left a gap in the Government system of commercial education. There is now nothing between the Intermediate Schools of Commerce and the University; and the University really recruits only from the secondary schools. There are at least two possible remedies: (a) The institution of another higher school, but on more practical lines than the former one, and obtaining its students from the Intermediate Schools of Commerce as well as from the secondary schools; (b) the provision of suitable evening classes. There are good arguments, pedagogical and financial, in favour of the latter course.

LIBRARY—"THE MIRROR OF LIFE."

BY MR. D. KRISHNAYYA, *Hindupur.*

THE moon is like a great mirror in the sky and reflects the light of the sun; so is the library that reflects the mighty minds of all ages—the ever lasting friends of mankind.

The modern library movement stands for stamping out the illiteracy of the country and for the perpetual stream of culture in the literate. 'Look into the mirror to know thy defects', is an age-long adage, so also USE the library, the mirror of life, to find your noble solacing friends. The mirror is needed to one and all: so is the library to the young and the old as in the grammarian's funeral of Robert Browning.

Modern age being an age of democracy is marked out for 'self-study,' which is the all-pervading spirit of the library. The children—the nucleus of the future—for their self-study do require the aid of the library in order to have their association with the great children in literature all the world over. The

young for correcting themselves require the library wherein correct ways of life are revealed through the rich experiences of authors. Hence we have Bacon's expression—'Reading becomes character;' follow the stream of culture from cradle to grave is the eastern urge as pointed out by the rich heritage of the East. library is a rich power-house of knowledge and by the right use of this, immortality is gained.

'To carry knowledge to the doors of those that lack it and to educate all to perceive the right—even to give away the whole earth cannot equal that form of service.'—*Manu*,

Let us try therefore to use the library, the mirror of life, to our own advantage as well as to the use of those that need it which is the highest form of humanitarian service. Let us be up and doing. Let us possess knowledge—the cow of plenty and freely grant milk to one and all who need it.

(MODERN INDIA STORY BOOKS)

By Mrs. CORRIE FEARON, Ed. B. (Edin.)
Superintendent, Child Education Department
Teachers' College, Saidapet

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OUR CONTEMPORARIES.

Forty Years of the English Public School.

T. N. Siqueria writes in the *Teaching* :—

A cane, a piece of chalk and a teacher—that was school in England forty years ago. And outside school were 'poor' little half-starved bodies, shivering coatless and hatless in the depths of winter. To-day each teacher has only one class of not more than 48 infants or 40 older children. Punctuality and politeness mark even the poorest pupils. The feeble-minded have been separately provided for. Medical services are an integral feature of the school administration. 'Ardent social revolution' has been effect.

The English school system was the result of circumstances rather than of thought. The beginning of State education in England was made through the system of payment by results.....After the infant class, the school children were classified into standards based primarily on age: at the end of the year there was an examination of each pupil by H. M. Inspector. The teachers were paid according to the results of this examination and the number of pupils they had attracted to their classes. Such a system...reduced teaching and learning to a competitive economic industry: it made cramming and cheating almost a necessity. But it decentralised education and saved it from undue interference from political parties and changes: it enforced discipline in an unruly age, as well as a healthy mixture among different social classes...

The second act in the drama of English Public School Education began with the Code of 1895 [s. 84 (6)] which substituted 'visits without notice' by H. M. Inspectors for the previous annual examination visits. The free-

dom which the absence of rigid annual inspection allowed individual managers led them to classify their pupils in a less rational way, to prepare their own syllabuses, to adapt themselves to local and social conditions, to arrange their own time-tables—in a word, to take an interest in schools.

Within a decade, another need was felt. Public elementary and secondary schools were all too uniform to serve their purpose of fitting boys and girls practically as well as theoretically for the work of life.' In an historic manifest, issued in 1904, Sir Robert Morant urged that "the (Public Elementary) School must at the same time encourage to the utmost the children's natural activities of hand and eye by suitable forms of practical work and manual instruction." This was followed in 1926 by the Hadow Report on the Education of the Adolescent. Elementary Education was no longer to be considered a complete education. It must only be one of 2 or 3 stages: a primary stage must end at eleven and be followed by a post-primary stage where all children could have a choice between many different types of secondary education according to their capacities and inclinations. Some would go on to the secondary school, preparatory to the University. Others to senior schools and thence to commercial, literary and evening institutes of continuative education: and others still could be promoted from secondary and senior schools to junior technical schools where they would be trained for skilled careers.

These two reports are, however, only signposts; there is still a long way to El Dorado. The fact (of two serious defects of the system as at present) was described by Mr. Baldwin in a letter to the teaching profession in 1929.

"The classification of our schools has been on the lines of social rather than educational distinction: a youth's school badge has been his social label"... Another complaint is that education has increased unemployment—and discontent. But there is every sign that the money spent by the English tax-payer on elementary and secondary education has not been wasted. There has been since 1895 a real progress not only in literacy and in various kinds of school efficiency but even in the general well-being of the nation as a whole. "The public system of education," as Mr. Lowndes remarks, "has become a principal foundation of practically every new activity in the community."

The history of English Public School Education since 1895 holds more than one lesson for India. She is in many respects where England was then.

Training the Hand.

Dr. L. P. Jacks writes in the *Aryan Path* : "Until mental and moral education is *underpinned* by a right physical education it will have no firm foundation.....A trained and skilful hand on an untrained and unskilful body is a most unpromising combination, indeed I think we may say an impossible one. If the body as a whole is untrained in balance, poise, natural self-control, the economy of movement and energy, if it knows not how to breathe, to stand, to walk and to co-ordinate the action of one part with that of every other part, then I do not see how it is possible to get good results in the arts, the handicrafts or anything else by the training of the hand alone. Perhaps we may *begin* by training the hand, but if we do so we shall find we cannot get very far until we have trained the rest of the body to back it up and support it. If, on

the other hand, we begin by training the whole body in the qualities just mentioned we shall probably find that the hand will soon participate in the general skill so acquired, become not only ready, but eager for skilful work and take to it spontaneously. This I consider the better beginning. In my view the education of the lines indicated is the right beginning for all human education whatsoever—the beginning, but of course not the end. Until mental and moral education is *underpinned* by a right physical education—and there are many wrong kinds—it will have no firm foundation."

The Film in Education.

Mr. Kamalakant Mookerjee writes in the *Indian Journal of Education* :—

Films as instruments of education have not yet been practically introduced in India, owing to various difficulties, the foremost of which is this that most of our schools cannot even purchase an epidiscope or a magic lantern, and they cannot possess educational films of their own. Secondly, though their value is inestimable it has not been quite realised yet except by a few progressive and modern educationists and psychologists. Hence, there is the lack of proper organisation owing to the ignorance of the masses and the want of sufficient culture and education amongst most of our parents and guardians. But considering the utility of such a means of practical education, as indicated above, it is absolutely essential that special films should be prepared for educational purposes and mainly suiting the requirements of our children, as the majority shown in the public cinemas are definitely bad. There must be a huge organisation for carrying on this scheme of work.

It is a hopeful sign of the times that there is a growing recognition of the utility of such a constructive programme of work and let us

hope that in course of a very short time educational films dealing with topics on History, Geography, Science, Nature Study and even Literature will be introduced in our schools and welcomed by the authorities for giving them a fair trial, for certainly they can be regarded as excellent means for imparting lessons. For practical purposes the filming may be done with a 16mm. motion-picture camera which does not require any high degree of technical skill to handle and it is also fairly economical to maintain. This equipment, of course, only makes silent pictures which is all the average school can hope to achieve. But when the children will be required to learn the various speech parts, the sound films will serve the purpose.

The time will come when films will be playing a greater part in the education of children, and school life will then be less boring, school books prove more interesting and the teacher less important in the matter of child education.

New Education.

The Hon'ble Mr. B. G. Kher, the Prime Minister of Bombay, writes in the *Bombay Teachers' Journal* :—

At Wardha we did not consider any cut-and-dry scheme. The ambition and process of thought of those who were present at Wardha were the same as those of other enlightened educationists. There is nothing wrong in aiming to impart education through a process which would equip a student for some useful occupation after he leaves school or college. That is what most of the students aim at. A large number of students go to colleges because they have nothing else to do.

I had occasion to meet students who came out to India from England and speak to them,

Each one of them had an exact idea of what course to follow after completing his education.

Unfortunately in India, students do not know what would happen immediately they leave their college or school. We must make earnest efforts to impart such education to our boys that they would be self-reliant and useful members of society in later years. Such a thing should have to start early in life. This was one of the questions discussed at Wardha. Of course, there are so many difficulties which have to be surmounted.

There is a misapprehension as to what is meant by education being made self-supporting. We shall require a large number of trained teachers for this new system of teaching. The present lot of teachers is looked down upon as mere appendages. This great maladjustment must be remedied. The status of the teacher must be the very highest in the land. There is a couplet which is daily recited in Hindu households which says : 'The teacher is the creator; the teacher is the preserver; the teacher is God Maheshwar; the teacher is Brahma incarnate; salute the teacher.'

In fine, the Hon. Premier points out :—

There is the necessity of different types of schools for boys emerging out of secondary schools. I am not against University education, but I am against each and every student wanting to undergo University education just to get employment. Our ambition is to make an average man better equipped than he is to-day, or attain a higher level of education than he does today. On that depends the measure of progress in all aspects of life.

Such a kind of education can be had only through the mother-tongue. It is very difficult to learn things, however simple they are, through a language which is not one's own.

These difficulties will have to be surmounted, only we have to be earnest.

Hidden Spring behind the Wardha Scheme.

Mr. M. K. Venkataraman writes in the *Bombay Chronicle*—Sunday Edition, dated 31-7-38 :—

"The State-making dream is a very old dream in the history of the world. It plays too small a part in novels. Plato and Confucius, Buddha, Gandhiji and Tolstoy in our own day are but the highest of a great host of minds that have had a kindred aspiration, have dreamt of a world of men better ordered, happier, finer, securer. They imagined cities grown more powerful and peoples made rich, happy and multitudinous by their efforts: they thought in terms of ending the muddle and disease and dirt and misery and the confusions that waste human possibilities. They thought of these things with passion and desire as other men think of the soft lines and tender beauty of women. Thousands of men there are to-day, almost mastered by this white passion of statecraft.

A Dynamic albeit Silent Personality.

A shining example of this host of humanity is Mr. B. D. Aryanayakam, the hidden spring behind the much talked of Wardha Scheme, and his no less dynamic wife, Mrs. Aryanayakam, who is in charge of the Wardha Training School, the centre and hub of the entire scheme. Unassuming in disposition, in spite of a pre-possessing personality and a beaming face, his tall and well-built figure and clear-cut features will hardly put you in mind of the puny race of Tamils from whom he hails. It was, therefore, with mixed surprise and curiosity that I learnt during my recent visit to Bombay at the time of the

Premiers' Conference, that although a Tamil, he is actually descended of Ceylonese stock.

Mr. Aryanayakam is officially the Secretary of the Hindusthani Talim Sangh, which was entrusted by the Haripura Congress Session with the work of drafting the syllabus of the famous Wardha Scheme. Kaka Saheb Kalelkar and Acharya Kripalani are the other two members of the Committee. The principle of a scheme of self-supporting education was first suggested by Mahatmaji and later enlarged by Dr. Zakir Hussain of Delhi. Few would have realised that behind this historic achievement was the patient spade work of Mr. Aryanayakam carried on for nearly two years at the Sheogaon Ashram, to induce Gandhiji to lend his powerful prestige to a scheme of basic national education conceived by himself during his Russian and Swedish tours. Gandhiji was to the scheme of Mr. Aryanayakam what the "Prince" was to ancient Machiavelli, who, although powerless himself, saw a way of doing the work of State-building by seizing the imagination of a Prince. Once his dream was seized by Mahatmaji, like the characteristically selfless man that he is, he has receded into the background.

Education through Basic Crafts.

The principle of basic crafts is inspired by the success of similar institutions in Russia and Sweden and was the first nucleus suggested by Mr. Aryanayakam. The famous principle of making it pay for the support of education was added by Gandhiji and later on elaborated by Dr. Zakir Hussain: for Gandhiji was the earliest to realise the atrophy of the young Indian mind through the soulless non-national education of our schools, which are

kept under thralldom by the State grants and, therefore, incapable of escape from Government dictation. The earliest planned educational hygiene was the starting of various Vidyapeeths, which were later expected to play a significant part in the development of national education and replace existing Universities. With the coming into power of the Congress the question of broadbasing the Vidyapeeth national education was urgent. (The mere recognition of their degrees, as was recently done by the Bombay Cabinet, was not the ultimate aim, the opinion of many nationalist educationists). The Congress in power could have wrought a transformation. But, what Gandhiji was planning for was a scheme whose fate did not have to depend on the fortune of the Congress or the whims of political parties, a scheme which was to be self-supporting. It is to be regretted that this self-support feature is tardy of achievement.

The essentials of the scheme are its insistence on nationalism. Education to be healthy, as Premier Kher is fond of insisting, should be indigenous and suited to the genius and spirit of a race. That India had not yet produced a Dalton or Dr. Montessori to correlate her genius and spirit to her education was a slur on the originality and drive of our educationists. It is a consolation that we have our Kalelkar and Aryanayakams.

"Mr. Williams."

When I met Dr. or Mr. Aryanayakam, as he wishes to be known, at the Y. M. C. A., at Wodehouse Road, Bombay, I was instructed

by Kaka Saheb Kalelkar to ask for "Mr. Williams." I asked for "Mr. Williams," and was shown to a tall man in Khadi, a long 'lalchi,' 'panchakacha' and the typically laced 'angavastram' or upper cloth of the South. His Tamil was accented in a way suggestive of Tinnevely. I hoped he was from the South of Madras. I was destined to be disappointed. He was from Ceylon and had felt attracted to Bengal after graduating from Kandy. His post-graduate work at the Calcutta University over, he made two trips to Europe and was Secretary to Dr. Rabindranath Tagore, both at Santiniketan and during the poet's travels. He also obtained his doctorate.

A Worthy Spouse.

Associated with Mr. Aryanayakam in his work is Mrs. Aryanayakam, nee Miss Ganguly, who threw up a brilliant career as Principal of a Women's College at Benares to organise the Wardha Training Centre.

When I talked to him at the Y. M. C. A. building on that night in May, his modesty struck me. He was in difficulties about his food arrangements. On enquiry I learnt that it was because he was a vegetarian. I was surprised. Was he not "Mr. Williams"? Was he not, therefore, a Christian and a non-vegetarian? He was more surprised than myself how I happened to call him "Mr. Williams".....Kaka Kalelkar.....told me.....to ask for "Mr. Williams".....Really.....Well, to this day I have not solved this little mystery, as I later learnt that Mr. Williams was not his name.

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NEWS AND NOTES.

KURNOOL DISTRICT TEACHERS' GUILD.

A general body meeting of the Kurnool District Teachers' Guild was held on Saturday evening, 9-7-38, in the Coles Memorial High School. There was a good gathering of men and women teachers and heads of institutions representing all the local associations and also delegates from Nandyal and Atmakur. Rev. B. J. Rockwood, M.A., Guild President, occupied the chair.

Mr. K. N. Pasupathi, Secretary, welcomed the delegates and presented the interim report on the activities of the Guild during the past half year. He read the financial statement for the period under review and pointed out the need for improving the Guild's financial position. The report was duly adopted by the meeting.

The Secretary then suggested alterations to bye-laws relating to rates of subscription, changes which had been recommended by a Sub-Committee of the Managing Council. The house resolved that they might be referred to all affiliated associations for opinion and brought before the next meeting.

The following office-bearers for the year 1938-39 were then elected:—

President: Rev. B. J. Rockwood.

Vice-Presidents: { Mr. M. Ramayya.
" P. Raju.

Secretary: Mr. K. N. Pasupathi.

Joint Secretary: Mr. K. Nilakanta Rao.

Guild's Representative
on the S. I. T. U. } Mr. G. Siva Rao.
Executive:

Extra Members of the
Managing Council:

Mr. M. P. Rajam Iyer.

" N. Sondaresh Aiyar.

" Ch. Narasimham Pantulu.

Mrs. P. S. Raju.

Miss Lima.

The President then called upon Mr. K. N. Pasupathi to read the draft address to be presented by the Guild to the Hon'ble C. Rajagopalachari, Premier, on 10-7-1938, and the house gave its approval to it. It then elected a Committee consisting of Messrs. B. J. Rockwood, K. N. Pasupathi, M. Ramayya, G. Pullayya, G. Siva Rao and Miss Lima to interview the Premier and present a memorandum on behalf of the Guild.

Then Mr. K. N. Pasupathi addressed the meeting on the S.I.T.U. Protection Fund and appealed to such members as had not joined it to enrol themselves in this great brotherhood of teachers and promote professional solidarity, and mutual helpfulness among teachers besides making some provision for their families. He distributed Telugu leaflets on the Fund to elementary teachers.

With a vote of thanks to the President and the outgoing members of the Managing Committee the meeting terminated.

INTERVIEW WITH THE PREMIER.

On behalf of the Kurnool District Teachers' Guild, a Committee consisting of Messrs. B. J. Rockwood, K. N. Pasupathi, M. Ramayya, G. Siva Rao, G. Pullayya and Miss Lima, interviewed the Premier on 10-7-1938. The Premier and the Publicity Minister who sat by his side were garlanded, after the formal introduction of members. The Guild's memorandum, published hereunder was placed before the Prime Minister. For lack of time, only three out of the seven subjects raised in it were taken up for consideration, and all of them were questions of local importance.

The first was a request to the Government not to close any of the Board High or Middle Schools in the district on the score of its being "uneconomic." Mr. M. Ramayya, Headmaster of Atmakur Board High School, urged for retaining all Board schools, considering the educational backwardness of the district. The Premier felt there was a strong case in favour of retention.

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The second subject raised was a request to grant permanent recognition to the Municipal High School, Nandyal, and a subsidy to it. Mr. G. Pullayya of this school presented a separate memorandum on behalf of the Nandyal Municipal High School Teachers' Association, and placed some facts before the Minister.

The third point was a request to raise the local Government Middle School for Girls into a High School. The Premier asked Miss Lima, the Headmistress of the school, about the strength of the first three forms. Messrs. B. J. Rockwood and G. Siva Rao said that there were many girls studying in the local Boys' schools and they would all join a Girls' High School, if it was opened. The Premier felt that there was not strength enough in the middle school to justify its being raised to the status of a High School. Yet he would place our requests before the Education Minister.

MEMORANDUM OF THE KURNOOL DISTRICT TEACHERS' GUILD IN CONNECTION WITH THE INTERVIEW SOUGHT BY ITS REPRESENTATIVES DURING THE PREMIER'S VISIT TO KURNOOL.

1. The question of closing down some High and Middle Schools in the District on the score they are uneconomic.

Economic and educational backwardness of the district requires special consideration and treatment at the hands of Government. It is prayed that the existing schools, which are not many, may all be retained permanently.

2. *Nandyal Municipal High School.*
Government is requested to accord permanent recognition to the school and grant a fixed subsidy to it or meet its net cost, as in the case of other Municipal schools in the Ceded Districts.

3. *A Girls' High School for Kurnool needed.*
No facilities for higher education for girls in our district. The local Government Middle School for Girls may be raised to a High School.

4. *G. O. No 4619 L & M of 1934.*
The scales of pay in the G. O. require to be liberalised and made equal to those obtaining in Government schools.

5. *G. O. on Text Books.*
Regarding the method of prescribing of text-books in public secondary schools, the heads of institutions or committees of school staff may be vested with power instead of giving it to Chairmen of Municipalities and Presidents of District Boards and the District Educational Officers, as at present.

6. *Improvement in the conditions of service of teachers in Aided Elementary and Secondary Schools.*

Standardised scales of pay may be introduced and insisted on by Government in all private schools. Uniform rules regarding leave to be framed.

7. *Provident Fund.*
A higher rate of interest than that offered by the Postal Savings Bank to be given to the Provident Fund investments of teachers. Government to consider the question of investing the Fund in more paying Banks.

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CONTOURS. BY C. BOXHALL AND E. J. P. DEVEREUX. GEORGE PHILIP AND SONS, LTD. CR. 4TO 30 PP. 1s. 8d.

The sub-title of the book which is written by two geography teachers of schools in London is 'An introduction and a series of exercises designed to demonstrate the contour method of representing physical forms and to give preliminary practice for the study of contoured maps, particularly the ordnance survey maps.' As the subject of contours is generally not studied with zeal by our school pupils in the Sixth Form course, the method of introduction adopted in the present book, *vis.*, a large number of block diagrams, would help pupils to understand the subject with ease. Every part of the book has been planned with care and the illustrations, directions for observing noteworthy features of diagrams and the exercises leave nothing to be desired. The ordnance survey map chosen for study is a part of sheet 138 of the Popular Edition England—a Philip publication—a welcome addition to the teachers' geography shelf.

STORIES OF ROBIN HOOD AND MORE OF STORIES ROBIN HOOD—ADAPTED AND REWRITTEN WITHIN THE THOUSAND WORD VOCABULARY, BY A. S. HORNBY, OF THE TOKYO SCHOOL OF FOREIGN LANGUAGES AND TOKYO HIGHER NORMAL SCHOOL. GEORGE G. HARRAP AND COMPANY, LTD. 116 AND 112 PP. 1s. 6d. each.

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required by each particular kind of story. The special words used in the preparation of these two books are from the 72 words chosen for story telling and even of these only 27 words have been used in the first book and seven more in the second book, *vis.*, More Stories of Robin Hood.

Whatever one may say for purposes of argument regarding the suitability of a thousand English words being the equipment for a youth studying English, we might be permitted to say that an average school final pupil would be a better scholar for a thorough knowledge of this vocabulary rather than hazy notions of several words the use of which might not be properly understood at all. If the two books under review should be read by any one without being told that the vocabulary is limited to a thousand words it is unlikely that the person feels that the books are written with a limited number of words. Excepting the word 'eat' the grass for 'grazing' all other words convey the correct idea for the proper situation. All incidents connected with the Sherwood outlaw are well narrated in these two books. These books would be valuable additions and help for Library hour study in the Fourth and Fifth Forms. The illustrations by T. H. Robinson and R. H. Block are worthy of special praise.

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AN OUTLINE HISTORY OF INDIA. BY K. SRINIVAS KINI AND U. BHAWANI SHANKAR RAO. OXFORD UNIVERSITY PRESS. CROWN 8VO. 172 PP. Price 12 ANNAS.

The book has been written according to the syllabus issued in June 1937 for Form IV by the Madras Education Department. The authors have become well-known in the field as those who have written many books for high school pupils. The facts have been narrated in a simple style capable of being easily understood by an average Fourth Form pupil. There are a number of maps (some of them are overcrowded with names as those on pages 37 and 85 and it is hoped that unnecessary names will be removed in the next edition) and illustrations, questions on the subject matter and a list of important dates—all these add to the value of book. This well printed book deserves to be very popular in our high schools.

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GREAT LIVES OF OTHER LANDS, BY W. BERTRAM WHITE. METHUEN AND CO., LTD. PP. 118. Price, 2s. 6d.

This is a collection of five biographies, without any obvious principle of selection in the subject. Two geniuses of Poland are here, the musical Paderewski and the scientific Curie. General Smuts of South Africa and Henry Ford of America figure in the book besides Lindburgh of the flying fame and Marshal Lyantey of France. The book is interesting reading, but it is not full enough in treatment to satisfy the general reader and it is not peptomised either for children at school.



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