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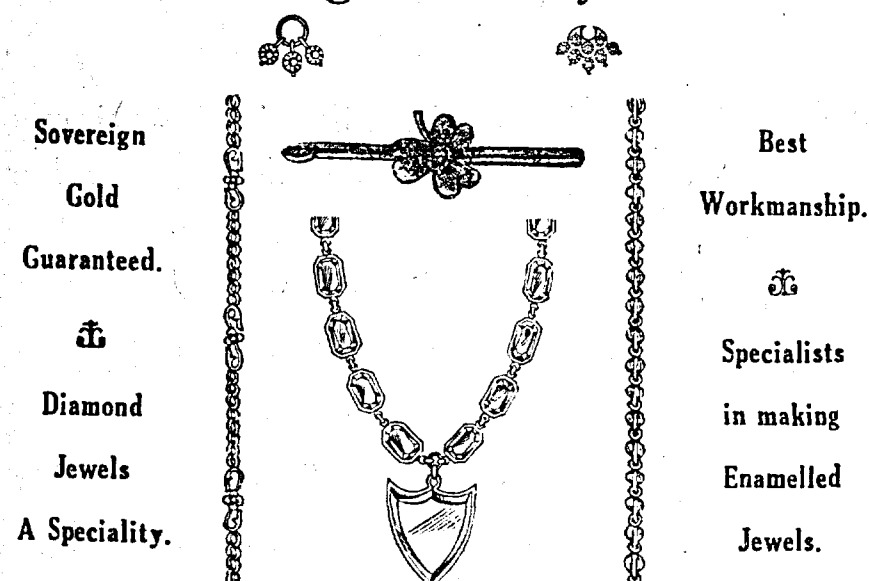
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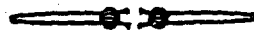
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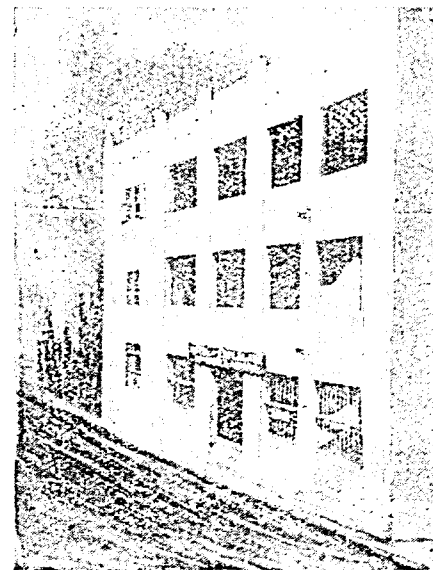
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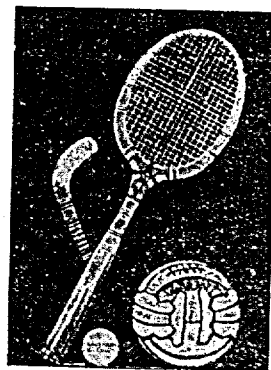
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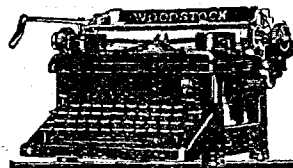
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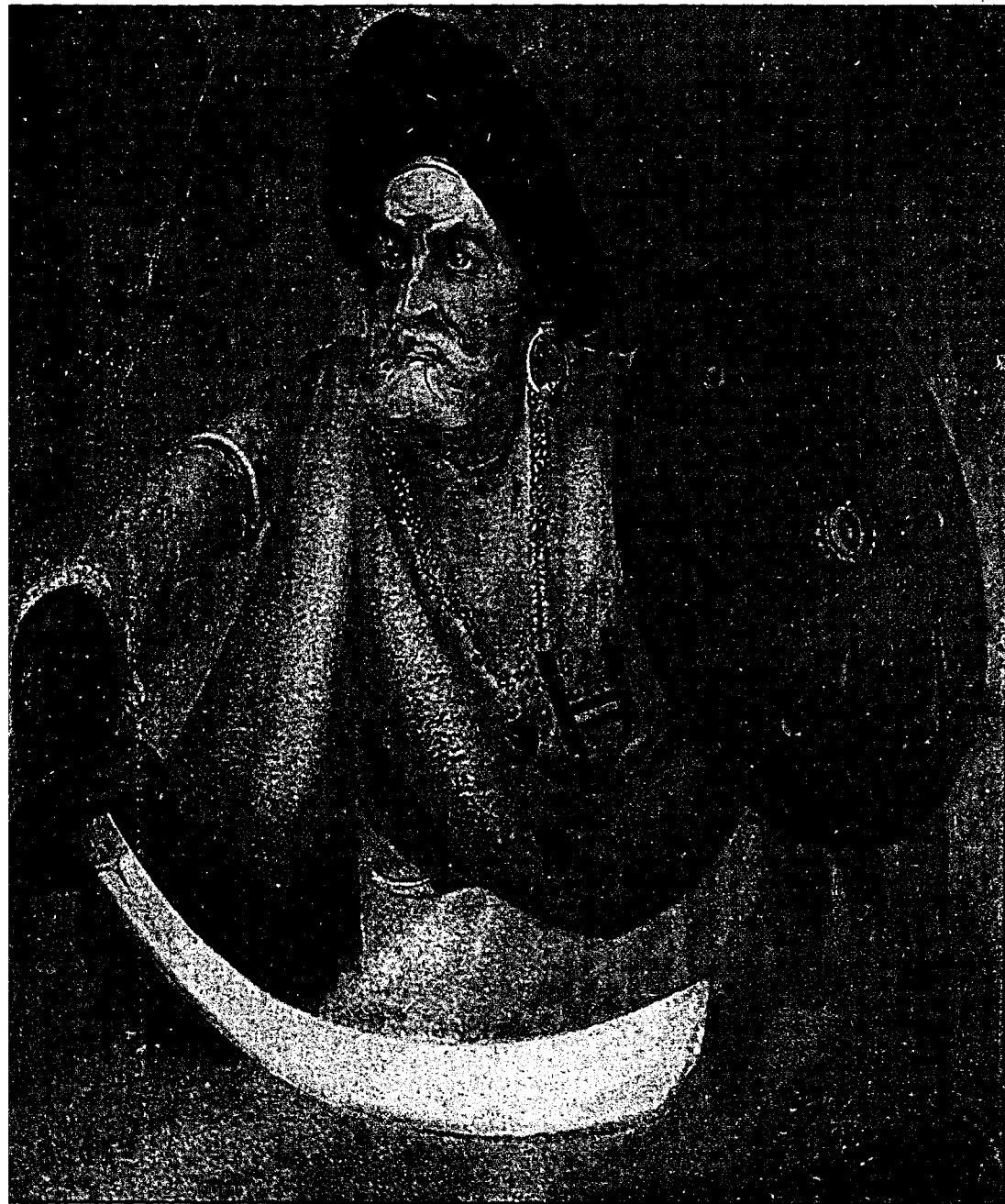
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No. 1.

To Our Readers

The fact that THE SCHOLAR has lived through a fairly long period of thirteen years (with this Number it begins another year of its life), during which it has striven to keep alight the lamp of culture does not bring to its promoters as much joy and satisfaction as they might ordinarily expect to feel on such an event. For one thing, the belated issue of this ANNUAL NUMBER painfully reminds them that the handicaps which beset its path in the past continue to exist, though in a smaller measure. For another, neither the subscribers' roll nor the advertisement ledger has shown adequate progress or sufficient encouragement to justify them in launching on schemes of improvement in any of the many directions in which they would like the magazine to develop. So, willy-nilly, they have to reconcile themselves to marking time and to feel thankful that they have been permitted to carry on at least, with the knowledge that the magazine, even as it is, does serve an obvious purpose. They are conscious that even this hand-to-mouth existence would not have been possible were it not for the support now extended to them both by the readers and advertisers, for which they are deeply grateful. They trust that this patronage will be continued and that, for their part, they would prove worthy of the support extended to them.

It is a truism to say that we are living in stirring times. But while Western countries are witnessing the triumph of might over right and trying to do the impossible feat of evolving peace by piling up armaments, India has set herself to the task of achieving peace and her salvation through the doctrine of non-violence and is devoting herself to substantial constructive effort towards all-round national uplift. The work of the Congress Ministries (whose advent we had occasion to welcome in our previous Annual Number) has been sufficiently encouraging to lead one to hope that given the time and the facilities, they would achieve something substantial towards the regeneration of the Motherland. The scheme for educational reorganisation, the move for the eradication of illiteracy and the attempt to develop the economic resources of the country by a coordinated, inter-Provincial effort through National Industrial Planning, not to speak of the various ameliorative measures for the general good and uplift of the masses fill one with hope and expectation. Not the least important and beneficial result of the advent of a People's Government (despite its irritating limitations) is the change in the attitude and mentality of the people—from passive acquiescence in their lot to active awareness of their rights and duties, their needs and aspirations. The critical attitude, naturally more marked in youths than in others, may be embarrassing at times, but it is an asset of potential good, which deserves to be encouraged. The problems that await solution are many and varied in every department of national life and they need to be thought out and discussed at length by all serious-minded persons. We invite them—as we have done before—to make THE SCHOLAR the medium to share their thoughts with others and to help the solution of questions with their constructive ideas. In the great task of dispelling the ignorance of lakhs and lakhs of our people and bringing enlightenment to the villages, all persons who claim to be educated, could help, as, indeed, it is their privilege and duty to do, by imparting instruction in person wherever possible and by dissemination of useful knowledge through newspapers and periodicals. We trust that in the year we begin now, we will see more evidence of the realisation of this duty on the part of the patriotic sons and daughters of the Motherland than what we have actually seen.

Seals

By NICHOLAS ROERICH



UCH is said about the ancient Chinese seals which have been found in Ireland. The antiquity of these seals is referred to several centuries before our era, some even think several thousands of years. On the basis of these seals, the question is debated as to the ancient relationships of Ireland with China. Others observe that there could have been an intermediary point in Egypt or Crete, which had a long-standing relationship with both the Far East and with the British Isles, which latter served as the source of certain metals.

Indeed all such questions require many confirmations and complementary facts, but nevertheless, the discovery of ancient Chinese seals in Ireland again reminds us about the extension of long-distance relationships already in the most remote times. Long ago we had occasion to find in Kurgans of the Stone Age in Central Russia amber from Koenigsberg. Already before the knowledge of metals, in neolithic times, are thus demonstrated relationships at quite extensive distances.

All archaeological findings, the uniformity of many discovered types, and finally, the details of ornament, rituals, and the other elements of their way of life indicate not only a community of the feelings common to man but also unquestionable relationships at long distances. The similarity of the alphabet not long ago discovered in Harappa and Mohenjo Daro India, with depictions on Easter Island also indicates noteworthy international relationships many centuries before our era.

Without any difficulty it is possible to discern, how entire protracted periods confirm the development of international relationships, and then as it were there comes on a strange tribal forgetfulness, a timorous immobility, and the memory of former relationships is wiped away. In itself the memory of peoples represents an extraordinarily interesting manifestation. To contemporary man it sometimes seems perfectly inadmissible, that in any manner entire peoples could forget about something already fully known to them. The facts and allusions in ancient chronicles indicate the possibility of just such strange forgetfulness.

Many completely lost technical methods of Egypt, the existence of gun-powder in ancient China, the details of various lost techniques of Babylon, certain objects of the Mayan culture—all this reminds one about the fact that very essential discoveries, incomprehensible to us, have been forgotten in their entirety.

Moreover such forgetfulness does not always coincide with epochs of advancement or decline. It is precisely as if some other psychological or even physiological facts have altered the channel of the current of popular thought.

Amidst all the misunderstandings and presuppositions, the question of the most ancient international relationships always proves very complicated, yet it is especially interesting from the point of view of peace. The discovery of objects of definite antiquity in remote countries is a material sign of some relationships, the more so when the objects are found in ethnographically old strata, which actually belong to a formerly current life. Something extremely inspiring is contained in these substantial signs which are actually embodied in these seals of national relationships.

And again at present, in certain countries inertness and immobility are so clearly manifested, in that there are inhabitants of certain cities who are proud of that fact that they have never had to go out beyond the limits of their native city or that they have even succeeded in keeping from crossing a river which flows through the city. There are all sorts of droll people. But among the strangest extravagances, such a prejudice of immobility always remains one of the most striking. Yet what a great number of people exist who have never glanced beyond the limits of their country! Only in recent years has travel re-entered as it were the program of self-education. Whereas from remote antiquity have been borne to us voices calling out about the usefulness of travel and of international knowledge.

The celebrated, everlastingly mentioned Marco Polo must be looked upon as a collective name. Frequently by this name are meant the infinite number of travellers who have been the bearers of international relationships. The name of Marco Polo has become firmly fixed in history, but indeed a great number of names, of ancient beaten paths, remain unknown. But that is not the question. Of course any historical name becomes not so much a name as a concept. It is precisely this, that on the ancient discovered objects we see incomprehensible to us marks which serve us as conventional signs, yet which formerly were the personal seals of some firms or of some definite individuals.

Each reminder about international relationships is as it were a new seal upon the human peace treaty. Not so long ago in London a certain Spaniard, Madariaga, delivered a quite pompous speech about the price of peace. No bombasting abstractions are the substantial signs of peace, but first of all, the material seals of world relationships.

People are actually thinking about peace; some self-interestedly, others selflessly. In all cases there is required some sign, the substantial seal of the fact that outside of human violence

and hatred there have been possible peaceful relationships in different domains of business.

The price of peace is defined as living human merit and dignity, as benevolence of heart, broadly embracing and noble. Not by denials of cultural treasures but by recognition of the creativeness of good is the price of peace defined and established.

Archaeology as a science based on material memorials is manifested right now as an assistant in many scientific and social considerations. And likewise into the question of the price of peace archaeology can bring many most precious signs. From long forgotten ruins, from abandoned burial-places and the remains of palaces and cities can be adduced material proofs of peaceful international relationships. In semi-historical writings, in old hieroglyphs, the story reaches one's ears about how, in fragile boats and on wearied horses, man has penetrated remote regions not only in warlike fury but also in a good desire for peaceful exchange. Underneath these narratives will be placed as it were material seals, ratifying the human peace treaties.

In the creativeness of good it is always possible to come to terms, only in a paroxysm of malice or of dark misanthropy are peaceful advancements impossible. Long ago it was said in various tongues: "He who uplifts the sword will also perish by the sword", and he will perish in a pre-ordained hour which will perhaps be for him quite unexpected. And so it is in each quarrel and in each dissension.

The seals did not ratify quarrelsome contracts. The seals were affixed to a document of some relationships, of some business establishments. Yet in each true business will be the element of peace. A victory through beneficial signs will be a most radiant and striking victory. It is possible to kill with a serpent sting, but not conquer, for to conquer will mean to convince. In such prices of peace, let us refer carefully to all material signs. It would have seemed inordinate to connect Easter Island with Harappa, India, or now—Ireland with China. Yet what is impossible at present? Seal or depicted hieroglyph are fully convincing. "Peace on earth, good-will to man" is also imperative, for good-will is engendered in the heart. And what is more substantial than the human heart, in all its inspired ascent?

Man should rejoice at each seal of peaceful relationships. Each sign of remote international agreements is a pledge of the possibility of future treaties, heartfelt and unbreakable. At one time savage warriors devoured the hearts of the vanquished, but now in each peaceful relationship let people remember about the living heart. The seals of antiquity are for the future.

Frontiers in Art

By Dr. J. H. COUSINS

Head of the Department of Fine Arts of the University of Travancore.



member of the Travancore Legislature was reported recently in the press as having deprecated the emphasising of Kerala art in connection with the new University of Travancore, on the ground that art has no frontiers.

As a matter of mere argument, the error that is involved in the frequently expressed notion that anything which is of world-wide human application should have its local distinctions ignored or put in a second place, can be shown by parallel variants. To say that, because art has no frontiers, Kerala art in a University in the Kerala region should not be emphasised, is equivalent to saying that, because health has no frontiers, there should be no emphasis on the vital statistics of Coorg in a Medical School at Mercara (if there was one). It is also to say that, because food has no frontiers, the details of the eatables of Sind should have a secondary place, or be ignored, in a dietetic institute in Karachi.

Moreover, and obviously, a closure on talk of Kerala art, because "art has no frontiers" (a false premise, as we shall see), logically applied to other regions, would deny to posterity the pleasure and edification of reading George Moore on French art, Laurence Binyon on Chinese art, Arthur Waley on Japanese art, discourage hints of a developing American art, and (if personal frontiers were also eliminated) cause Bernard Shaw to maintain silence on Shavian art.

As a matter of fact frontiers in art (Persian art, Celtic art, and the like) are a fundamental presumption of art-study, just as personal frontiers are a fundamental presumption of art-practice. Within major groups, there are sub-groups, like the Jaipur style in Rajput painting, and the Kano style in Japanese painting. These groupings, even the individual "group" such as Nicholas Roerich within the Russian sub-group and William Orpen within the Irish sub-group, both of the major European group, involve frontiers. Genius may cross the territorial frontier; Matthew Maris, the Dutch painter, may work in London, and Fujita, the Japanese painter, in Paris. But Dutch and Japanese art remain. Raja Ravi Varma worked physically within the geographical frontier of Kerala, with occasional excursions beyond it. But he crossed the aesthetical frontier of Keralan art into the double-frontiered region of Hindu ideas and European technique. Yet Indian art goes on; and the Indian sub-group of Keralan art,

after a period of obscurity, has begun to assert its claim, not only in painting but in all the arts, to its place as the proper mode of creative expression of the people of Kerala; a local variation (through the influences of climate, scenery, materials, traditions and temperament) of a creative impulse which is universal and in that sense alone can be spoken of as having no frontiers; even as the universal impulse to rhythmic motion has no frontiers, yet has within it the clearly marked domains of the Bharata-natya and jazz.

Curiously enough, the same phrase, "art has no frontiers," was used by Mr. Percy Brown in a lecture on "The Arts of Nepal" before the India Society in London, as reported in the latest issue of "Indian Art and Letters." But, while two persons thus used the same phrase, they made it the starting-point to quite different termini. Mr. Brown said: "Art has no frontiers, and the pupils of those famous exponents of the Magadhan or Middle Country school, whose names the historian Tara Nath has recorded, Diman and his son Bitpalo of Varendra, probably carried the art into Nepal. Under a new environment the productions of these Bihar artists lost some of their Indian character, which was replaced by that from China." In the same lecture Mr. Brown notices the "pagoda type" of structure in both Nepal and Malabar. To his examples of window construction on projecting beams, which, he says, "is founded on a very ancient tradition," and of craft "stunts" in lizards carved on a lintel, he could have added projecting windows and lizards on wooden doors in the Padmanabhapuram Palace in Travancore.

The gist of Mr. Brown's remarks, and of these examples of details in art, is that there are no frontiers across which special turns of technique (in metalwork in the instance which he mentions) or special motifs in ornament (he mentions the conch, the familiar *shank* of Travancore heraldry, in Nepal) may not be carried by artists. But this is far from saying, as the other use of the frontier-phrase seems to imply, that any phase of art anywhere should have the attention of a University in a particular region, but that the art of the region itself should have its face turned to the wall. On the contrary, Mr. Brown's reference to the change undergone by the Bihar metalwork when it migrated to Nepal (a change roughly paralleled by the modification of Persian painting on the Indian terrain and Indian dance in Java) touches the central principle of art-creation, the principle of the transformation of elements from outside into some degree of affinity with the genius of an area and its conditions.

This principle of transformation is central because it concerns the indigenous localised creative necessity of any culturally

distinctive group of people. The immigration of motifs and methods is part of the "tourisme" of art. Some of them may have a transient interest for speculative artists. Some may be sufficiently congenial to the local genius to "go native", and by absorption to lose their strangeness. Others may rank as domiciled aliens; and those that have the power to retain this relationship to the local art are likely to be powerful enough, under favourable circumstances, to assert an unnatural influence over local culture, and through this influence to put dead imitation in the place of living creation.

There is nothing more essential to the well-being of the individual than congenial self-expression in the arts. There is nothing more valuable, both spiritually and materially, to a people than the rich free art-expression of its own genius and environment and tradition. One of the first duties of a University should be the fostering of the creative expression of the people of its area and the putting of that expression to the uses of both the inner and outer aspects of the people's life.

The "Durand Line" and Unrest on the North-West Frontier

By Dr. NANDALAL CHATTERJI, M. A., Ph. D.

University of Lucknow



THE search for a truly scientific frontier in the border land between India and Afghanistan became a pressing problem in the post-Mutiny period when the defects of the Indus Line of defence became increasingly apparent to the military authorities particularly during and after the second Afghan War. An extremist among the Forward school that he was, Lord Lytton proposed to push India's frontier into the Hindukush so that it might extend from Kabul to Kandahar through Ghazni. The fall of the Conservative Ministry postponed the acquisition of this advanced scientific frontier, but the very fact that Lord Ripon did not wholly give up the advanced frontier from the Khyber to Pishin and Sibi, obtained during the last war, showed that the Government of India had decisively abandoned the idea of "Back to the Indus".

The new frontier established by Lord Ripon was, however, the result of a compromise. In an extreme anxiety for closing the Afghan War without the least delay, the Government of India over-looked the need for a satisfactory demarcation of the Indo-Afghan boundary in the tribal "No-man's Land". From the strictly military point of view there was much that could be urged in defence of the Forward school that stressed the need of pushing the frontier line into the heart of the trans-border country.

It was in Lord Lansdowne's time that the Forward policy again came to the fore-front owing particularly to the influence of Lord Roberts, the Commander-in-Chief. The mission of Sir Mortimer Durand, Foreign Secretary to the Government of India, to Kabul in 1893 was the natural sequel to the recrudescence of the Forward policy in this period.

The Durand Mission, the importance of which has not been adequately stressed in the text-books of Indian History forms a land mark in the evolution of India's Frontier policy. Its origin may be ascribed to a number of objects. Firstly, it was necessary to assert the right of suzerainty over the independent tribal country. Secondly, the demarcation of a scientific frontier was long overdue. Thirdly, the existing "close border" system in the tribal country had to be modified in collaboration with the Amir of

Kabul. Fourthly the latter's claim to suzerainty over the whole of the tribal country had to be amicably discussed. Fifthly it was essential to prevent, by some satisfactory compromise, the chances of Afghan expansion towards Chitral and Gilgit. Lastly, a workable Indo-Afghan boundary had to be found for purposes of preventing future controversy or friction.

Sir Mortimer Durand succeeded in bringing about an amicable agreement with the Amir, whereby the British and Afghan spheres of influence in the tribal country were permanently defined. The boundary subsequently demarcated on the spot by joint British and Afghan Commissioners runs, north to south, through the heart of the trans-border country, dividing it into two halves, and is popularly known as the "Durand Line".

It is a great pity that the unsound character of the "Durand Line" has wholly escaped the attention of the Indian politicians who are usually loud in their denunciation of the Government's Frontier Policy. Even the Government of India never publicly admitted the defects of this line. That much of the trouble in the border country has been a direct result of the faulty delimitation made by the Durand Commission is completely ignored at the present day. A study of the actual delimitation, and of the subsequent history of Frontier unrest makes it clear that the Indian authorities had seriously blundered in 1893 while agreeing upon a haphazard and unscientific line of defence.

The "Durand Line" does not satisfy the essential conditions of a sound military and political boundary. That it does not form a good line of defence will be admitted by the military authorities to-day. It does not also follow clearly defined natural features. For instance, salients have not been avoided, which should have been done from considerations of strategy.

The value of the Durand Line has been grossly over-rated of late, and only the latest official publications incidentally reveal that the cantonments have been withdrawn from the Durand Line at a number of places for purposes of better defence. This amounts to a confession of the fact that the Durand Line does not possess any strategic value.

Superficially viewed, the work of the Durand Commission might seem satisfactory. At any rate, the old uncertainty in regard to India's frontier was now gone. There were also better chances for establishment of peace in the clearly defined British zone. The control over the tribes was easier, and the problem of imperial defence on the side was no longer vague and ambiguous. The defects of the line, however, far outweigh these so-called advantages.

The worst blunder committed by the Commission was that they relied too much on the opinion of doctrinaire military experts, and paid no heed to the political, historical, ethnological and economic aspects of the problem. For example, the ethnic absurdities perpetrated in dividing certain tribes have been mainly responsible for some of the worst risings in Waziristan and the Mohmand country. It was a serious mistake to grant a slice of Waziristan to the Amir, when the majority of the Waziris were kept on the British side. Again, it was equally wrong to bifurcate the Mohmand country in the same manner.

The blunders were heightened by the fact that the wishes of the tribesmen were not consulted at all. They were treated like cattle in the division of their country. These violations of ethnological considerations have aggravated the task of pacification in the country of the Waziris and the Mohmands. It is easy to understand how mischief mongers can always escape from the British zone and find shelter with their fellow tribesmen on the other side of the "Durand Line." Thus the "Durand Line" has definitely increased the chances of conflict not only with the tribesmen but also with Afghanistan.

The work of the Durand Mission was faulty in another respect. The authorities betrayed an unpardonable ignorance of the topographical details. It is amusing to be told that some of the places marked on Durand's map were at the time of actual demarcation not found at all on the spot. This again proves the hastiness of the authorities.

The problem of defence of the North West Frontier cannot be simplified, unless the military, political, and racial imperfections of the "Durand Line" are fully realised and, if possible, removed in agreement with the Government of Kabul. How far the actual circumstances will permit a revision of the Durand Line is difficult to hazard, but the fact remains that this line is one of the most unscientific and dangerous frontiers that India could be saddled with.

Cultural Pluralism

The Only Permanent Solution of the Communal Problem.

By Professor BOOL CHAND, M. A., Ph. D. (Lond).
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HE one condition that is indispensable, is in fact pre-
cedential to any attempts, for the solution of the com-
munal problem in any country is that members of the
minority groups must recognise that they too have responsi-
bilities towards the rest of the population. They must recognise
that the economic system as it is at present is highly competitive,
and they must not, therefore, expect special privileges. In India
unfortunately, such a condition is not easily available to-day :
under the pressure of a foreign ruling power there is naturally a
premium upon separatism and disintegration. With the growing
industrialisation of the country, however, and as a consequence
of it, the gradual turning of peoples' immediate thoughts to eco-
nomic problems rather than to matters of religious enthusiasm,
this condition must in the course of time be achieved, but even
when it has been achieved the solution of the communal problem
can be secured only by the process of what is called 'cultural
pluralism'.

Cultural pluralism is the name of the theory of adjustment
and harmonisation of the cultural and social values of various
communities in a nation. It constitutes the philosophical basis
for the integration of culture groups in a country, and as such
it has significant implications for the various departments of our
communal activity. For Government its implication is that
minorities are entitled to a real and not merely formal equality
of the laws. Its implications for Education are most wide: not
only must school text-books be rewritten and misinformation
about minority groups corrected, but there must be a general
encouragement of an attitude of active appreciation for diffe-
rences. For Religion cultural pluralism implies the training of
child mind in such a way as to be capable of fully appreciating
the significant tenets and folkways of its own faith without at
the same time shutting itself off from the appreciation of the
general cultural environment of the nation. Cultural pluralism
has important implication also for Industry, for according to its
belief, genuine cultural tolerance is impossible without a degree
of economic freedom and true cultural democracy can be broad-
based and supported only by industrial democracy.

It must be understood that cultural pluralism does not con-
template merely a federation of distinct cultures in the nation.
What it comprehends is that eventually all groups must merge
into a pattern that is large enough to contain them. It is, how-
ever, of great importance that the tempo and the method of
amalgamation of these groups must be free and democratic. From
the point of view of the psychic health of the individuals involved
and the morale of the groups to which they belong, it makes all
the difference in the world whether they are asked to conform
to something predetermined or to a whole which they have a part
in defining. The repressed and the frustrated individual is no
good anywhere: it is only the self-willing and the functioning
individual that forms the constituent of good society.

That being so, it becomes necessary to train a whole body of
individuals in the habits of thought as well as of sympathy and
understanding. This is possible only by a well-organised scheme
of education for equality. Psychologists have again and again
pointed out that the so-called prejudices—race prejudice, colour
prejudice, communal and religious prejudice—are not instinctive
in children: they are taught by or more properly caught from
the child's social environment. Not that our school system
deliberately inculcates them, although it is quite true that most
of our schools reflect the dominant attitudes in this respect. Our
present educational methods merely aid in creating stereotype
patterns which characterise our everyday behaviour. These
patterns are based on mob psychology, and naturally, therefore,
people are not encouraged to break from the established modes
of mob thinking. Education has not attempted consciously to
substitute mob reactions which have good social attitudes for the
mob reactions which are detrimental in effect. Our citizenship
teaching has been limited mainly to courses in civics and govern-
ment. It has not helped to teach the child to learn the lesson of
give and take, to cultivate an appreciation for the differences be-
tween the cultural and social values of the people about him, or to
co-operate with all the rest for the realisation of the supreme
good of the whole. In short, it has not sought to instruct the
future citizens in the sociological presuppositions of a truly
democratic society. Our school curriculum has sadly omitted
from its scope that positive education for equality, which has
helped the U. S. S. R. today to tap its tremendous reservoir of
human energy, composed of at least 150 nationalities of former
Russia, and which alone can in the circumstances of our country
enable us to remove from our society wholesale traditional pre-
judices and destructive attitudes. In the context of our remedy
of cultural pluralism this omission must be made good.

Not only must this omission be immediately made good and the scope of education enlarged; but along with this orientation in the scope of the educational system there must also be organised a definite plan of cultural adjustment and harmonisation of the various communities. The underlying assumption in any such plan is that every minority has a characteristic community life of its own, which must at all events be secured and perpetuated, with full possibilities of its internal growth and development. But once such opportunities for the perpetuation of the distinct cultural heritage of each minority have been provided, the problem then is how to bring about mutual social adjustment between the various communities. For this we would suggest the following few measures in the nature of a plan of action.

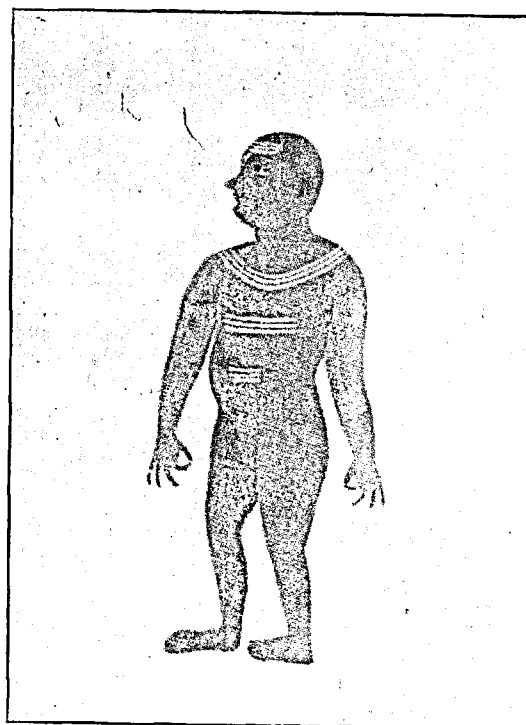
1) A national inventory of the cultural and social values of the various racial and religious minorities ought to be prepared jointly by scholars of the majority and minority groups.

2) There should be organised a National Committee of Harmonisation and Adjustment, whose purpose would be to define the various culture traits of the different minorities and to decide which ones of these traits fit into the patterns of the national life so that the minority need not surrender them and which ones produce dangerous maladjustment. An example of how such a scheme can work successfully in an educated community is provided by America where in 1920 on a question of difference between Christians and Jews as to the extent to which Americanisation should be held to be equivalent to Christianisation in exclusion of Judaism, the matter was satisfactorily adjusted in a joint meeting of the Central Conference of American Rabbis and the Federal Council of Churches.

3) An advertising campaign on a national scale, emphasising and putting forward the best that is offered by minority groups, should materially help to achieve harmony and adaptation of cultures.

4) Irreparable damage has been done by many things written in text-books of schools and colleges as well as by inexcusable omissions. A National Committee, working through local committees should be able to secure the proper presentation of the cultures and social values of racial and religious minorities.

5) Above all, appeals to the conscience of the nation would make a growingly large number of men and women, who believe in the broadest extension of goodwill and national greatness, interested in the task of bringing about cultural and social adjustment between the various communal groups.



SRI SADASIVA BRAHMAM

[By kind courtesy, The Administrator,
Pudukottah State].

Sadasiva Brahmam, the Prince of Paramahamsas

By Prof. V. RANGACHARYA, M. A.



O the student of Indian philosophy, thought, art and spirituality there is no name more familiar than that of Saint Sadasiva Brahmendra Sarasvati, the sage, scholar, poet, master of arts and the servant of God. In an age singularly rich in intellectual giants he shone as a singularly emphatic person; and time has but contributed to make his person even more emphatic. To the pure-souled Bhakta who rejoices in the names and glorifications of God the music of his *Sankirtanas* and hymns is a perennial inspiration. To the Yogin and realiser of the divine communion he is a pattern whose life bristles with achievements. To the literary savant who looks for the beautiful externals of the spiritualist's thought and well-stored mind, his language possesses a never-ending charm. To the Vedantin of the Advaita school he remains a teacher unrivalled in lucidity and practical guidance. To the Yogin, the Bhakta, and the *Gnani*, thus, Sadasiva Brahmam appeals equally home; and there is no saint in Indian history, the incidents of whose life present to the student of religion those panoramic pictures we have in his case. More than a century and a half has passed since Sadasiva Brahmam lived and taught; but his memory is still green in the study-halls and *bhajana-kutas* of modern Hinduism in the south.

Sadasiva was the son of a Chokkanatha Makhin, a learned scholar of the village of Tiruvisainallur, a few miles off Kumbhakonam in the Tanjore district. To the student of religious history there is no holier place than this village which produced such eminent sages as Bodhendrasvami, Aiyaval, and Ramabhadra Dikshita. History in fact tells us that it was founded and endowed as a colony of learned teachers and sages by the well-known King Shahji of Tanjore (1684-1711), the son of Venkoji, the founder of the State, and a magnificent patron of literature. Chokkanatha was the son of a Tippadhvari by his wife Narasamba. He belonged to the Bharadvaja Gotra, and was one of six brothers—Yagnesvara and others—who enjoyed the sunshine of the Tanjore court in the midst of a galaxy of illustrious names. Chokkanatha Makhin was an erudite teacher who had the illustrious Ramabhadra Dikshita, the prolific writer of a hundred works, for his pupil and afterwards his son-in-law. Chokkanatha himself has left

several literary works. He wrote the *Kantimati-parinaya*,¹ a drama on the marriage of King Shahji with Kantimati. He has also left a humorous drama or rather *bhāna* in the *Rasavilasa*.² Chokkanatha Makhin was not satisfied with the laurels he obtained in the Tanjore court. He proceeded to the court of the ardent Saivite, Basavappa Nayak of Ikkeri, the great chief of South Kanara, who ruled from 1697 to 1714. A mark of his visit he has left in his romantic drama *Sevantika-parinaya*.³ *Sevantika* was the daughter of Mitravarma, the King of Malabar, who was defeated by King Godavarma of Cochin and then imprisoned in the temple of Mukamba north of Udipi. Basavaraja is said to have received Mitra with kindness and then cemented the friendship by marrying his daughter.

Sadasiva was thus the son of a renowned writer, who was a literary knight-errant, appreciated in distant chiefdoms like Tanjore and Ikkeri. He inherited his father's talents in full—in fact surpassed him by his gifts both of nature and acquisition. Sadasiva had for his teacher his own brother-in-law Ramabhadra Dikshita, who seems to have been more elderly in age, and had for his co-pupils the renowned Sridhara Venkatesa Aiyaval and Bhashyam Gopalakrishna Sastri who, to infer from his literary title, must have been an expert in the *Advaitabhashya*, and who afterwards became the court Pandit of Pudukottah. The story goes that Sadasiva did not only earn a name for wisdom and learning among intellectual giants but, being a hermit by instinct, abandoned the life of the householder on the very day of his wife's attaining age,* and embraced the life of a Sanyasin. It is evident that from the beginning he had a wrestling with the impulse of temporal distinction; but his heart never ceased to beat in love to the less gifted of mankind.

Sadasiva then became the pupil of a learned Vedantin and Yogin named Paramasivendra Sarasvati, and attained mastery in the sciences in which his master excelled. A strange story is related of this period of the young scholar's life to explain why he came to lead the life of an itinerant Yogin. He is said to have engaged systematically all scholars who used to come to his preceptor and overthrow them in disputation, and the teacher once asked him in play when he would keep quiet! The teacher's voice was indeed one of love and admiration, but it was sufficient to cut the young man, in whom the spirit of the recluse was instinctive, to the bone, and he resolved to take the bandage of

1. Tanjore Catal. VII, 3367. 2. Aufrecht, II, 116. 3. Tanjore Catal. III, 4064.

* The story is that, on account of the festivities on the occasion, he had to wait long for food, and that he saw in this an epitome of worldly life and so gave it up.

wordly triumphs off his eyes, by inflicting on himself a vow of eternal silence. Ever after, we are told, that is, throughout his secluded life as an itinerant yogin, he, engaged in Samadhi 'far from the madding crowd', kept himself in touch with the outside world only by writing and signs, and never by speech. The story seems to be strangely inconsistent with the theme of some of Sadasiva's literary works. As will be shown presently, he was a favourite visitor to many of the royal courts of the age, and he has left the marks of such visits in works of rhetoric and drama which are certainly not the usual *forte* of an exclusive sanyasin who judged life only by avoiding the zest and part in it. But it is wrong to hold that the story was an invention. If there is any lesson to be learnt from the marvellous manner of Sadasiva's life it is this—that he had, in spite of his vow of silence, sufficient love of humanity to make himself understood.

Sadasiva soon developed into a rare *avadhuta* sanyasin. An erudite Vedantin and Siddha with marvellous yogic powers, he combined the Bohemian existence of such a life with a devotee's. A votary of the Nirguna-Brahmam, he was not oblivious of the *Sagunopāsana*. Avoiding all contact with the world, he spent his days either in samadhi or as an itinerant yogin. Observing no distinction of caste or colour, he received food from one and all, and, when he got none, subsisted on the remnants thrown into the streets, or on the leaves of trees and plants. An Avadhuta daubed with *vibhuti* and mud, he seemed to the masses to be a lunatic; but to men of wisdom he summed up in his person all that was possible in the obliteration of distinctions in humanity, and in a holy and saintly life. Sadasiva spent his days usually far from the beaten track, though he was occasionally seen in areas where quietitude did not reign supreme. In gardens and secluded parts, in the midst of forests or sands of the river beds, in places frequented and unfrequented, he was seen wandering naked in utter indifference to what was going on around him, and in unbroken habitude of silence. Many pieces of miraculous melodrama have gathered about his life. At Kodumudi, we are told, he was in *samadhi* on the bed of the Amaravati, when the floods suddenly came and buried him in the sands. Months later, when the river ran dry, certain labourers who excavated the spot for sand found their spades dripping with blood, and, on examination, discovered the sage still unconscious in his yogic trance. On another occasion, he laid himself down against a heap of corn-stacks in a village near Karur and, being mistaken for a thief, was about to be belaboured by the watchman, when the hands that were raised to strike him could not be moved at all! At Tinnevely, he once found himself in the midst of some officers who were preparing the supplies for the army. They covered his

body with a piece of cloth, and compelled him to carry fuel. When the whole supply reached its destination, it caught fire, thanks to the sparkle of fire in his eyes, and was burnt to ashes! At the holy village of Tiruchchendur he brought back to life the daughter of a nobleman who had died five days after her consummation by simply touching the corpse. He cured a Brahman of advanced leprosy at Ramnad, by giving a pinch of common earth! Sadasiva Brahmam was very fond of children. He used to share with them what he received in *bhiksha*. Once, while he was at Nerur near Karur, he was playfully requested by them to take them to the Vrshabha festival at Madura; and he, we are told, asked them to close their eyes, and then carried all of them in a trice to Madura, and returned the same night to the wonder of the parents! On occasions of great festivals like the *Sivaratri* and *Gokulashtami* he was seen at one and the same time in a number of shrines. His spiritual eminence, again, made a bachelor who served him a profound scholar; for, when he wrote the *bijakshara* at the tip of his tongue with a blade of *darbh*, he became so erudite that he distinguished himself in the Mysore State, and got endowments of land in the village of Nerur,—a fact remembered by his descendants there even to-day. A Muhammadan chief was, says another tradition, encamped at a particular place, and the saint entered his camp. Fearing that a lunatic was invading his harem, the chief cut off the saint's right hand. The latter, however, did not feel the loss, but went on like a machine, like a pulseless statue, with his usual peregrinations. Finding out the greatness of the soul he had injured, the Muslim chief followed him in due humility, and returned with the satisfaction that the saint had not been even aware of the injury he had sustained. Indeed, it was only after a long travel that the saint understood his loss, and even then, far from writhing in the paroxysm of anger, he simply and quietly restored the lost arm by a mere touch! Tradition records how, whenever Sadasiva uttered the names of God in a temple which he happened to visit, there used to drop from the sky a petal at the mention of each name; how he once surprised a sugar-manufacturer near Chidambaram by drinking boiling sugar-cane juice; and so on. No other saint indeed in history is the hero of so many exploits; and the wonder of it all

* When Paramasivendra Yogi was informed of this, he lamented his own lack of practical asceticism in this verse:

उन्मत्तवत्संचरतीति शिष्य-
स्त्वेति लोकस्य वचांसि शृण्वन्।
खिद्यन्नुवाचास्य गुरुः पुरोहो
ह्युन्मत्तता मे न हि तादृशीति ॥

is that he cared to be nothing more than a soul wandering alone and undisturbed through this illusive mist of world-experience!

It is remarkable that one whose eye was so exclusively bent on eternity was at times generous enough to respond to the human appeal for grace. The spiritual philosophy and practice of Sadasiva Brahmam was not neglectful of the woes of the mundane world. He was not a conceited monk, a stuck-up egoist, who, living in the spiritual clouds, regarded himself as too advanced to listen to the prayers of lesser men. The Tanjore *Sarasvati-Mahal* Library contains a manuscript letter * in Sanskrit verse addressed by a pandit named Ananta Deva to his patron, Raja Sarabhoji (1711—1729), the younger brother and successor of Shahji to whom reference has already been made. He says in it that he visited several holy shrines and waters in order to get the spiritual fruit of a son to his royal patron. He spent a day at Kumbhakonam and five days at Mayuram where he bathed in the Kaveri and prayed to the Lord morning and evening. He then proceeded to the temple of Vaidyanatha — the well-known Vaidyesvaran koil — and propitiated the Lord and his consort Balambika for blessing his royal patron with a child. He, then, he says, went to Dipambapura and had here an interview, which he had long desired, with Sadasiva Brahmam, who, he says, was none else than *Brahmam*. Bowing to him, he prayed to him for the sake of the king. The saint did not only show by signs that the king would have a son soon, but bestowed the manuscript of the work *Atmavidyavilasa*. The Pandit concludes that he gave the saint *bhiksha* for three days on behalf of the king, and then settled permanently, on account of his age, contentment, and bodily ailment (to cure which the king had sent a physician to him), at Trikot, one of the sacred Saiva villages on the Kaveri granted by the monarch, and built a *matha* there. He concludes his epistle with the news that he had just heard of the birth of a son to the king, and with the remark that the words of the great would never go unfulfilled.

It must be acknowledged that there is some mystery in connection with the contents of this letter. According to the known evidences Raja Sarabhoji had a son on whose birth the minister Aiyaiyanavaru * of Tiruvenkadu presented a cradle and chain of

* This letter is printed in the Introduction to the Vani Vilas Press edition of the minor works of Sadasiva. It is said to have been composed by Anantadeva at the instance of Mallari Pandita's mother, the connection with whom is not patent. The epistle contains 17 verses and shows how Sarabhoji showed solicitude even to the personal health of the literary savants patronised by him.

* The perplexing and conflicting tales current about this person form one of the historical mysteries of this period.

gold. One is tempted to believe that the birth of a son referred to in Ananta Deva's epistle, above summarised, must be in connection with this son who seems to have been known by the names of Savai, Shahji and Succoji. On the other hand, a Mah-ratta inscription * in the Tanjore temple, which is an invaluable document on the history of the dynasty, says that Savai Shahji was a bogus son pronounced as real by the selfish second queen of the king; that he was in reality the child of a washerwoman (named Kupi or Rupi); that the deception was discovered by Tukaji, Sarabhoji's brother, and revealed to the latter; and that the king had the child killed and his unscrupulous queen banished. According to a different version, the child was not really killed, but brought up surreptitiously in the forest till on a later day, in 1738—9, he successfully seized and held the throne, signalling his short rule by negotiations with the French and the Dutch for a futile attempt to perpetuate his usurpation as against Pratapa Singh, the illegitimate son of Tukaji, who eventually came to power and ruled from 1741 to 1765. Still another version holds that the Sahuji or Sayaji who ruled in 1738—9 was an impostor who pretended to be the 'kattu-rajā' or the exiled 'forest prince', while the view has also been suggested that he might have been after all a younger and legitimate son of Tukaji who was opposed by the factious 'sword-brother' Pratapa Singh. The greatest mystery, thus, prevails regarding the son of Sarabhoji; but the point that is raised by the epistle of Anantakavi is that Sarabhoji had after all a son. But whether this son was a really legitimate one who was the victim of vicissitudes, or an impostor and the real son of a washerwoman, we have no means to judge. By the bye, one is tempted to ask whether Sadasiva Brahman in sending the manuscript of the *Atma-vidya-vilasa* †, together with his alleged prophecy of progeny, had any motive at all? Did he indirectly preach to the king the virtue of resignation, thereby hinting that all would not be well in the future? One wonders.

The solicitude of Sadasiva Brahman to ruling houses is also obvious from the story of his alleged dealing with Ramavarman Kartika Tirunal, the contemporary King of Travancore, who ruled in great glory from 1753 to 1798, and who is traditionally known as *Dharmaraja* and *Kilava-rajā*. He was a singularly successful soldier, diplomatist and administrator who founded the greatness of modern Travancore, and the effects of whose

* This has been fully utilised by Mr. K. R. Subrahmanyam in his *History of Tanjore under the Mahrattas*.

† It may be pointed out here that there are two pieces of Sadasiva under the title of *Atma-vidya-vilasa*, one consisting of 65 Arya verses and the other of 43 Vasantatilaka ones. The work was first published or translated by Pandit Natesa Sastri and it is included in the *Prakaranas* published by the Vanivilas Press, Srirangam.

reforms are felt to-day. A linguist of remarkable talents he encouraged learning and literature with a generosity which has become proverbial, and himself wrote several works in Sanskrit and Malayalam. To encourage the art of dramaturgy he composed those famous stories for the *Kathakali*, which are popular even to-day. His singular taste and skill in music is immortalised by his *Balaramabharatam* *. In this he first describes in prose the inter-relation between *bhava*, *raga* and *tala*, and then gives a detailed treatment in verse of music, vocal and instrumental, and of the *natya* or dance. Sadasiva Brahman was apparently very much impressed by him, and composed, besides the romantic drama, *Vasulakshmikalyanam*, on the king's marriage with Vasulakshmi, the daughter of Sindhuraja, the rhetorical treatise *Ramavarman-yasobhushanam* in the name of the king on the model of Vaidyanatha's *Pratapaparudra-yasobhushanam*. Sadasiva also wrote the drama *Lakshmi-kalyanam* in which he panegyrically refers to King Martandavarman (1729—58), the predecessor of Ramavarman.

About this time Sadasiva Brahman came to the forest near Tiruvarangulam in the Pudukkottah State and is said to have lived there for eight years. Vijaya Raghunatha Tondaman, the then ruling Chief of Pudukkottah, who was a man of a high religious temperament and been living as a practical recluse at Sivagnanapuram, was desirous of obtaining the grace of the sage for two reasons. First he had no son, and secondly he wanted to expiate the sin of having slain a Brahman of the village of Vahappatti in the State. The Tondaman obtained the sage's interview after a patient and sincere effort of many years. We are told that, when the saint listened to the king's confession and petition for an heir, he taught him, by writing on sand, the holy *Panchakshara* and placed him under the spiritual wardship of his old co-student, Gopalakrishna Sastri, and further gave him a small quantity of butter, impregnated with *Mantra*, to be taken by the queen. Tradition says how the son, whom Vijaya Raghunatha subsequently had, was, in consequence of this, named Navanita Tondaman. Sadasiva Brahman also gave Vijaya Raghunatha an idol of Dakshinamurti, which is worshipped by the Pudukkottai royal family even to-day. Above all, the saint ordered the king, in expiation of his sin, to feed every year a lakh of Brahmans during the Navaratri festival, and to distribute doles of rice, red in colour like the blood he had shed, to them. The

* The author of the *Travancore Manual* (Vol. I 417 and Vol. II 486) attributes this work to Ramavarman's successor Balaramavarman (1798—1810); but it is clear from the work itself and from an inscription (Trav. Arch. Ser. IV, 106) that the celebrated Ramavarman Dharmaraja Kilavan-rajā, who was also known as Balaramavarman, was the author. See *Catal of Sans. Mss in Travancore*, IV, 434. and Krishnamacharya's *His. Sans. Lite* p. 804.

king and his descendants, moreover, were enjoined to perform special propitiatory puja to Durga, the goddess of blood, and at the same time gratify the learned poor by liberal patronage.

Vijaya Raghunatha closely followed these instructions; and his descendants have done so ever since. Even to-day a visitor to the Tondaman's palace at Pudukkottai during the Navaratri festival will see hundreds of Brahmans, men and women, of all sects and classes receiving each day, for a period of ten days, a measure of rice and five *kasus* each. Going into the palace he will find many a pious Brahman engaged, in the palace shrines of Durga, Lakshmi, Sarasvati and Dakshinamurti, in meditation and prayer, for the long life and prosperity of the royal family. Leaving the rambling buildings of the palace, he might wend his way, along the busy bazaar street, to the premises of the Sanskrit College, where he will find a large number of scholars, Vedins and Vedantins, Tarkikas and Vaiyakarnis, Mimamsakas and Pauranists, who have come from distant parts, and who, at the end of their discussions and disputations, receive presents in accordance with their studies and attainments. Everything takes place as it was organized by Vijaya Raghunath Tondaman eight generations back; and the antiquarian will be in the midst of an eighteenth century scene, of the days when Sadasiva Brahmam favoured his illustrious royal pupil. The very sands on which the saint wrote his instructions are preserved in the Tirugokarnam temple as sacred relics.

A brief survey of the various works of Sadasiva Brahmam can be now attempted. Reference has been already made to the *Atmavidyavilasa*, the *Ramaraja-yasobhushana*, etc. The other works of Sadasiva Brahmam include the *Navamanimala* in ten stanzas of the Giti metre on his Guru;¹ the *Atmanusandhana*, in 36 *Anushubh* verses, on the method of contemplating one's self as identical with Brahman; the *Svapnodita* on the tribute to the spiritual preceptor who, in the case of the author, is said to have taught his disciple in his dream-state; the *Svanubhutiprakasika*, in 11 Giti stanzas, on the self-contemplation as spiritual essence; the *Dakshinamurtidhyana*, a prayer to Lord Dakshinamurti; the *Mano-niyamana*, a mandatory address to the mind to devote itself to Siva, the Infinite; the *Nava-varnaratna-mala*, a prayer to Siva (Adi-desikendra)²; the *Siddhantakalpavalli*, a poetic version of Appaiya Dikshita's *Siddhanta-lesa-sangraha*; the *Advaitarasa-manjari*; and, above all, his *magnus opum*, the *Brahmasutravrtti*

1. These works have been published in a small booklet of 59 pages by the Vanivilas Press, Srirangam. The introduction quotes the epistle to Shahji already described.

2. With the commentary *Kesaravalli*, it has been printed at Srirangam. Pp. 120.

or *Brahmatatvaprasika*³, a brilliant work of immense value to the learned as well as the laymen. It gives the essence of the Advaita with all the authority which one who realised the truth of his teachings could bring to the subject. It is remarkably lucid and clear in its analysis. Sadasiva explains the different parts of every *Adhikarana* of a *pada* or *adhyaya* in the *Brahmasutras*. An *Adhikarana*, it is well known, consists of a *vishaya* or subject matter; *samsaya* or doubts necessitating the enquiry; *phala* or the benefit resulting from the adoption of either view; the *purvapaksha* or statement of objections to it by the objector; and the *siddhanta* or statement of the reasons of the author's views and conclusions. Sadasiva explains every one of these. He also explains the connection (*sangati*) between one *adhikarana* and the next. He also gives at the end of the *pada* or *adhyaya* a brief summary of it in one or two verses.

The *Brahmasutravrtti* consists of four *adhyayas*. In the first or *Samanvayadhyaya*, Sadasiva deals with the *Samanvaya* or the goal of the spiritual aspirant which is the same as the identity with Brahman. Dividing it into four *padas* Sadasiva describes successively the characteristics of Brahman and the Nirguna and Saguna Isvaras. The doubtful passages in the *Sutras* are explained as well, and reconciled to the general conclusions on the subject. In the second chapter or *Avirodadhya* Sadasiva replies to objections that may be raised against the chief statements made in Chapter I. These objections and answers are given under the headings of the *Smrtis*, reason, and the rival religious systems. An account of the creation of the five elements is then given, and the apparent inconsistencies regarding the *Samanvaya* are then reconciled. In Chapter III or the *Sadanadhya*, Sadasivendra deals with the means of realisation. In the first *pada* he shows how the individual departs and returns in the round of births and deaths, and how this can be ended by the practice of *Vairagya*. In the second *pada* he traces the nature of *Jiva* (जिव) and Brahman (ब्रह्म), and in the third the identity of the two as can be seen by meditations. Sadasivendra describes the manner and methods of meditation according to the 32 *Vidyas*. He concludes this *Adhyaya* with an account of the *Angas* or accessions to the *Vidyas*, like virtues, contemplation, etc. In chapter IV or the *Phaladhya*, Sadasivendra deals with the fruits of *Brahma-vidya*. In the first *pada* the career of the *Jiva* in the *upasana* of the Nirguna and Saguna Brahmams is given. In the second the author describes the manner in which the *Jiva* leaves the body at death showing that in the case of *Nirguna* there is no such leaving at all. In the third and fourth *padas* the passage to *Brahmaloka* and the unity with Brahman (*Nirgunavidya*) are described.

3. Printed and published by the Vanivilas Press, with portrait and life of the saint in English. Pp. 322.

Sadasiva Brahman has also left an authoritative commentary on Patanjali's *Yogasutras* under the name of *Yogasudhakara*. It is a work of singular value as it gives the experiences of 'the greatest Rajayogin of South India'. It is in the four *padas* on *Samadhi*, *Sadhana*, *Vibhuti* and *Kaivalya* and is highly treasured as a guide to the practical Yogin.

As an exponent of *Sagunopasana*, Sadasiva's greatest contribution is the *Samkirtana* form of propitiating the Lord. His *Gitasundara* or *Sangitasundara* in the model of the *Gitagovinda* on God Somasundara, and his *Kritis*, possess a freshness and an appealing sweetness which time has hardly effaced. They possess, moreover, a supreme characteristic—the capacity to rouse the enthusiasm of even the comparatively illiterate. They are further suited to the orchestric methods of co-operative symphony. They appeal equally to vocalists and instrumentalists, to experts and to laymen, and to individuals and concert promenades. The soloist can have unlimited scope for the display of his skill in the singing of Sadasiva's *kritis*; but the less gifted can have equal scope in the opportunity for the concert. As the fit theme of classical technique and devotional charm they have contributed during the last century and a half to ennoble the *bhajana* halls of South India and to make men forget the miseries of the world and be for the time in the elysium of communion with the divine. They form a supreme example of eternal classicism, and defy re-valuations. They hold unlimited sway over the devotional minds. The Brahman has remained the master charmer who has made men forget that they are men and remember that they are parts of the divine! A more successful method of emotionalising the lessons of Advaitism it is hard to imagine; and Sadasiva Brahman remains a master charmer as he is a master teacher.

The manner of Sadasiva Brahman's death was as marvellous as his life. He foretold the exact time and place of his death, asked the king to have a tomb ready for him and consecrate on the grave a *linga* which would then be brought by a Brahman from Benares, and then vanished. In accordance with these words, the Tondaman proceeded to Nerur (Trichinopoly District), and there the saint appeared suddenly before the assembled king and people and as suddenly passed on to death. The pious and grief-struck king constructed a shrine over the remains of the being whom he worshipped as a God, consecrated the *linga* which according to the saint's prophecy, was brought at the time by a Brahman from the north, and granted two villages for the perpetual maintenance of the shrine and the performance of festivals during the Navaratri. And even today the Raja of Pudukkottai takes a keen personal interest in celebrating the festival.



By Nicholas Roerich.

"PATH TO KAILAS"

War and the Scientists

By SIR MARTIN FORSTER, F. R. S.



HERE are still many people, with sufficient cultivation and intelligence to know better, who nurse and propagate the superstition that scientists are responsible for the horrors of modern warfare. It was, therefore, highly appropriate that Lord Rayleigh, in his recent presidential address to the Cambridge meeting of the British Association, should have devoted some time to banishing this heresy.

The salient point in a discussion of the subject is the fact that the principal materials used in modern warfare were discovered many years before war assumed its present frightful aspect, and arose in the course of innocent laboratory experiments made by chemists with the sole purpose of ascertaining the laws of chemical combination. So far were the chemists in question from foreseeing the grim destiny of their discoveries, that probably the very last thing entering their minds would be an application to warfare; although latterly they might perhaps have hoped for some association with a new dye or a useful drug.

Lord Rayleigh illustrates this principle from his personal experience in the early days of the aeroplane era, as follows: "The Wrights made their first successful flight in 1903. In 1904 I myself heard the then First Sea Lord of the Admiralty repudiate with scorn the suggestion that the Government were interesting themselves in the matter; and I know with equal definiteness that even so late as 1908 the Chief of the Imperial General Staff did not believe in the military importance of flight. Would it be fair then to blame the inventors for not having realised it, and for not having stayed their hands?"

A glance at the history of chemistry will exonerate this branch of science as completely as Lord Rayleigh vindicates aviation. Violating the Hague rules of warfare, the Germans first used chlorine against the Allies on April 22, 1915. An eye-witness related that "there staggered into our midst French soldiers, blinded, coughing, chests heaving, faces an ugly purple colour—lips speechless with agony, and behind them in the gaschoked trenches we learned that they had left hundreds of dead and dying comrades". Chlorine, however, was discovered by the Swedish chemist, Scheele, in 1774, and to this extent accidentally that he was engaged in a study of manganese dioxide. It is recorded that as early as 1787 it was used as a bleaching agent near Glasgow by Mr. Macgregor, the father-in-law of James Watt; and for that

purpose among many others it has been used in vastly increasing quantities ever since. Its utility for generating chloroform was discovered in 1831, and the beneficent use of this product as an anaesthetic does not require to be emphasised. Remembering that Scheele died in 1786 it seems rather childish to blame him for the terrible misuse of chlorine 129 years afterwards.

Another notorious German atrocity was the introduction of the dreaded mustard-gas on July, 12, 1917, at Ypres: it has been calculated that during ten days of that year's autumn the enemy fired over one million shells containing about 2,500 tons of this material. The number of British casualties in the month following its initiation approached that of all gas-casualties incurred in the previous years of the war. Yet mustard-gas, actually a colourless, oily liquid boiling at 215°C , was first described by Guthrie in 1860, and was more carefully investigated by the famous German chemist, Victor Meyer, in 1886. Could any imagination, however distorted, associate Guthrie, or Victor Meyer (who died in 1897), with the ghastly horrors of 1917—18?

The same principle applies to the high explosives, picric acid (lyddite) and trinitrotoluene (T. N. T.), as also to the propellants, which are based on trinitroglycerol, first prepared by Sobrero in 1846. Aside from chronology, Sobrero may surely be acquitted of all sinister designs by the fact that he innocently distilled his new compound under atmospheric pressure. I can imagine how Sobrero felt afterwards because on one occasion, when confronted with a liquid product in a reaction expected to yield aniline, I nonchalantly distilled phenylazoimide (also an explosive) under atmospheric pressure. The boiling points of aniline and phenylazoimide are practically identical; the substance was distilled to the last drop, and revealed its identity only on analysis.

Does not all this go to show that chemists and physicists are the very last people to be indicted for the horrors of modern warfare? It is the political gangsters, making our lives a perpetual nightmare with their sabre-rattling and braggadocio, who must be blamed. Science suffers in public estimation from insufficient acquaintance with its aims and methods. This is pleasantly illustrated by the example of mis-reporting quoted by Professor J. B. S. Haldane who, having mentioned in an address that the moon was known to have a rough, broken surface and to be constructed largely of silicates (similar in composition to glass), was confronted with the following caption of a press-notice;

"Scientist's Amazing Theory: Moon Made of Broken Glass".

Influence of Psychology on the Indian Penal Methods

By ANATHNATH DATTA, M. Sc., B. L.

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AWYERS all over the world have felt the necessity of reforming the penal methods on psychological principles. In some of the civilized countries the work is already afoot. The object of this paper is to consider some aspects of the current penal methods of India and to show how they can, nay should be, modified on the basis of the accepted findings of modern psychological investigations.

Crime, according to Blackstone, is "a breach of public rights and duties which affect the whole community." Crime is, therefore, a public wrong. So the object of the criminal law is to protect those rights which reside in the public. But no right can be protected unless there are remedial measures. Modern Criminal law, therefore, also undertakes the punishment of the criminals on the assumption that punishment of the present offender prevents future crime. So Crime is defined under the Indian law as "an act or omission made punishable by any law for the time being in force."

Before we proceed to consider the methods employed in preventing crime, let us consider who are the persons liable for their wrongful acts. In determining the criminality of a person the law takes into account the mental condition of the person at the time of committing such offence. A child under seven years of age is not criminally liable for his wrongful acts because the presumption of law is that a child under 7 years is too young to understand the nature of his act. A child between 7 and 12, or a person of unsound mind, or a person under involuntary intoxication is exempted from criminal liability if he can prove that at the time of committing the offence he was incapable of knowing the nature and quality of the act or that he was doing what was either wrong or contrary to law. A person of mature age and of sound mind is liable for his act. But he may be exempted if he can prove that he acted in *good faith* for the benefit of the person wronged or he did it only "to avoid consequences which could not otherwise be avoided and which, if they had followed, would have inflicted upon him or upon those whom he was bound to protect, inevitable and irreparable evil, that no more was done

than was reasonably necessary for that purpose, and that the evil inflicted by it was not disproportionate to the evil avoided."

When a person is reported to be liable for an offence the legal step is to determine the truth about his liability. There are various methods of finding out the truth. The early methods of determining the guilt or innocence of a person were (1) the ordeal, (2) the torture, (3) the duel, (4) the benefit of the clergy, (5) compurgation, etc. The inefficacy of these methods having been sufficiently demonstrated, they have been gradually abandoned and the modern criminal laws no longer advocate them. The method of trial by jury can also be traced—though in a crude form—to the days long past. It is held by some that this method is a boon to the offender, because he gets the benefit of being tried by ordinary men. In the jury trial the offender is tried not by one man but a number of men. As each of them hears the case, there is the least chance of overlooking any salient fact which may be put forward in favour of the offender. But considered from the psychological point of view, the method suffers from some severe defects. The jury are sometimes selected from the persons who lack the powers of accurate observation and correct judgment. They are more or less swayed by the public opinion and their own sentimental attitudes. Moreover there are possibilities of their being influenced by the judges. In some of the cases the verdict of the jury is just the reverse of what is expected under the law. These are some of the reasons for which the system of trial by jury has been condemned by the lawyers and the public.

When the guilt of a person is determined the next legal step is to punish him according to the nature and gravity of the offence. Under the Indian law the following are the different kinds of punishment inflicted on the wrong-doer—(1) Death, (2) Transportation, (3) Penal servitude, (4) Imprisonment—Rigorous or Simple with or without solitary confinement, (5) Forfeiture of property, (6) Fine, (7) Whipping and (8) Detention in reformatories. Penal servitude is inflicted on Europeans and Americans sentenced to transportation. Juvenile offenders, i. e., offenders under 16 years of age, are detained in reformatories.

What is the object of punishment? Originally punishment meant primarily taking revenge on the wrongdoer for the wrong that he had done against individuals or organised society. This is best enunciated in the Mosaic Law, "An eye for an eye, and a tooth for a tooth." But at present it is used for (i) the prevention of future crime and (ii) the reformation of the criminal. That the original notion of retaliation still predominates, becomes evident sometimes from the nature and degree of the punishment inflicted.

Let us consider how far the punishments inflicted under the Penal Code system realise the avowed objects of punishment. The following tables will show the number of various crimes committed in a certain part of India.

TABLE I

(Cognizable cases under I. P. C. excluding offences against religion and public nuisances and offences under special acts.) *

	1931	1932	1933	1934	1935	1936	Average
No. of cases ...	6498	6287	6413	6665	7102	7718	6780'50
Cases convicted ...	2370	2500	2594	2408	2537	2605	2502'33
Persons convicted ...	2682	3459	3034	2911	3048	3129	3043'83

* Annual Reports on the Police Administration of the Town of Calcutta and its Suburbs.

TABLE II.

(Serious offences) *

	1931	1932	1933	1934	1935	1936	Average
<i>Coining</i>							
Cases convicted	25	27	41	34	19	31	29'50
Persons convicted	34	33	52	45	19	36	36'50
<i>Murder</i>							
Cases convicted	6	5	11	6	10	10	8'00
Persons convicted	8	7	17	10	13	11	11'00
<i>Robbery</i>							
Cases convicted	14	17	14	13	8	12	13'00
Persons convicted	29	31	25	27	12	20	24'00
<i>Burglary</i>							
Cases convicted	245	222	212	216	217	213	220'83
Persons convicted	299	270	256	286	260	268	257'50
<i>Theft</i>							
Cases convicted	1205	1151	1098	1176	1348	1379	1226'17
Persons convicted	1307	1306	1240	1306	1460	1528	1356'83

TABLE III

(Juvenile Offences) *

	1931	1932	1933	1934	1935	1936	Average
Sent up ...	1572	1020	1061	1570	2485	3336	1840'67
Warned & discharged ...	831	324	581	1014	1863	2437	1166'67
Whipped ...	43	26	21	46	18	9	27'17
Fined ...	386	296	170	156	239	392	273'17
Sent to reformatories ...	71	67	66	99	99	174	96'00

TABLE IV.

(Reconviction of old offenders) *

Number of old offenders re-convicted between 1925 and 1936 being 1999, 1598, 1779, 1848, 2043, 1777, 2548, 2750, 2923, 3901, 2979, 2797—the average being 2411'83

An examination of the above tables reveals the following broad facts:—

1. Average number of cognizable offences committed between 1931 and 1936 was 6,780'50 of which 36'9% resulted in conviction.
2. Average number of cases of coining between 1931 and 1936 was 2950; of Murder, 8'000; of Robbery, 1'3000; of Burglary 220'83 and of theft, 1226'017.

3. The number of juvenile crime has slightly increased. The average number of cases was 1840·067 of which 63003% warned and discharged, 14·84% fined and 52% sent to reformatories.

4. *The number of reconviction of old offenders has increased.* On the average there was 241183 reconvictions a year.

A critical consideration of the facts stated above reveals that punishment has not been able to prevent crime. As regards reforming the criminal, there is some truth in the statement that the sooner the crime is detected and punished in the individual, the greater is the chance of its eradication. Nevertheless from the psychological standpoint the method of early detection and punishment is at best a superficial one and does not produce any lasting effect on the offenders, because no attempt is made to prevent the development of the criminal urge in the individual. Moreover the same kind of punishment does not produce the same effect on different individuals. The effect of imprisonment on a poor, half-starved, destitute man and on a rich man leading a happy-go-lucky life can never be the same, because to the former prison is more than a home while to the latter it is nothing but a place of horror. Sometimes the prison becomes the breeding place of offences. Because in prison different types of offenders mix freely some of them get an opportunity of learning more about crime. Sometimes a man serving imprisonment for a long period, on coming out, finds like Rip Van Winkle that the world has changed. So when his attempt to adjust in the given society fails he prefers going back to the prison to living in an unfamiliar society. Moreover society often does not forgive an offender his fault. So when in spite of all his attempts he cannot lead an honest, simple life he commits crime with no other object than to go back to the prison. Professional criminals are often the result of imprisonment.

Solitary confinement is sometimes awarded on the assumption that it would reform the offender and the supporters of this method of punishment advocate that "separation at once renders corrupt intercourse impracticable, and furnishes the prisoner with direct facilities for reflection and self-government. Under this discipline the propagation of crime is impossible, the continuity of vicious habits is broken off, the mind is driven to serious reflection, and slumbering conscience resumes her sway. "But it is a psychological fact that persons specially of the extrovert type cannot live alone. Their innate desire is to mix with their fellow creatures. Stories are not unknown where offenders sentenced to solitary confinement made friends, if I am permitted to use the term, with lower animals. Now if this innate tendency is not allowed to be fulfilled, the man finds his life heavy. Thus solitary confinement instead of producing the promised effect, tends to affect the mental health of the offenders.

Now crime, as psychologists hold, is a symptom. It is a symptom of the mental disease. So to determine the measures necessary for preventing crime we should first of all know the root cause of such a tendency. It is a known fact that no human action is the outcome of the moment. Thus to understand the problem of crime we should look not only into the conscious but also into the unconscious mental sphere of the offender. If we know why a man commits crime we possibly may take such measures as will prevent the criminal from committing crime. Just as by administering quinine all kinds of fever cannot be cured, so by inflicting punishment on the criminals different types of crime cannot be prevented. So from the psychological standpoint prevention of crime and the reformation of the criminal can be effected only by removing the mental attitude which prompted the offender to such anti-social acts. If this is not done, no amount of punishment will do the offender any good. Therefore the sole aim of punishment should be to uproot the anti-social tendency from the mind of the wrongdoer. Punishment should be inflicted in such a manner as not to produce the demoralising and degenerating effect on the offender, or retard the growth of the higher and nobler qualities of the offender.

Prevention of crime is the most difficult problem of society. On the whole it can be effected by (i) change of environment, (ii) control over the environmental factors, (iii) understanding of the motive of the offender for the crime and (iv) by introducing certain changes in the present system of trial.

From the practical side of the subject prevention of crime is possible if in the trial the court be helped by a separate department manned chiefly by psychologists and psychiatrists. The function of the department should be to determine the steps necessary for the reformation of the criminal. The court should at first determine whether the person is guilty and if so, then on the basis of the evidence of the separate department, it should pass such orders as would be necessary for the reformation of the offender and the prevention of future crime. I am glad to say in this connection that juvenile offenders are frequently sent to the Department of Psychology in the University College of Science, Calcutta, for the necessary opinion of the psychologists.

Though we see that Psychology has exercised a certain influence on the Indian Penal Methods, its influence is as yet not what it should be. It is said that science has extended the field of the offender. But let me say that science will narrow the field of the wrongdoer. And in this noble work the contribution of Psychology will be the largest.

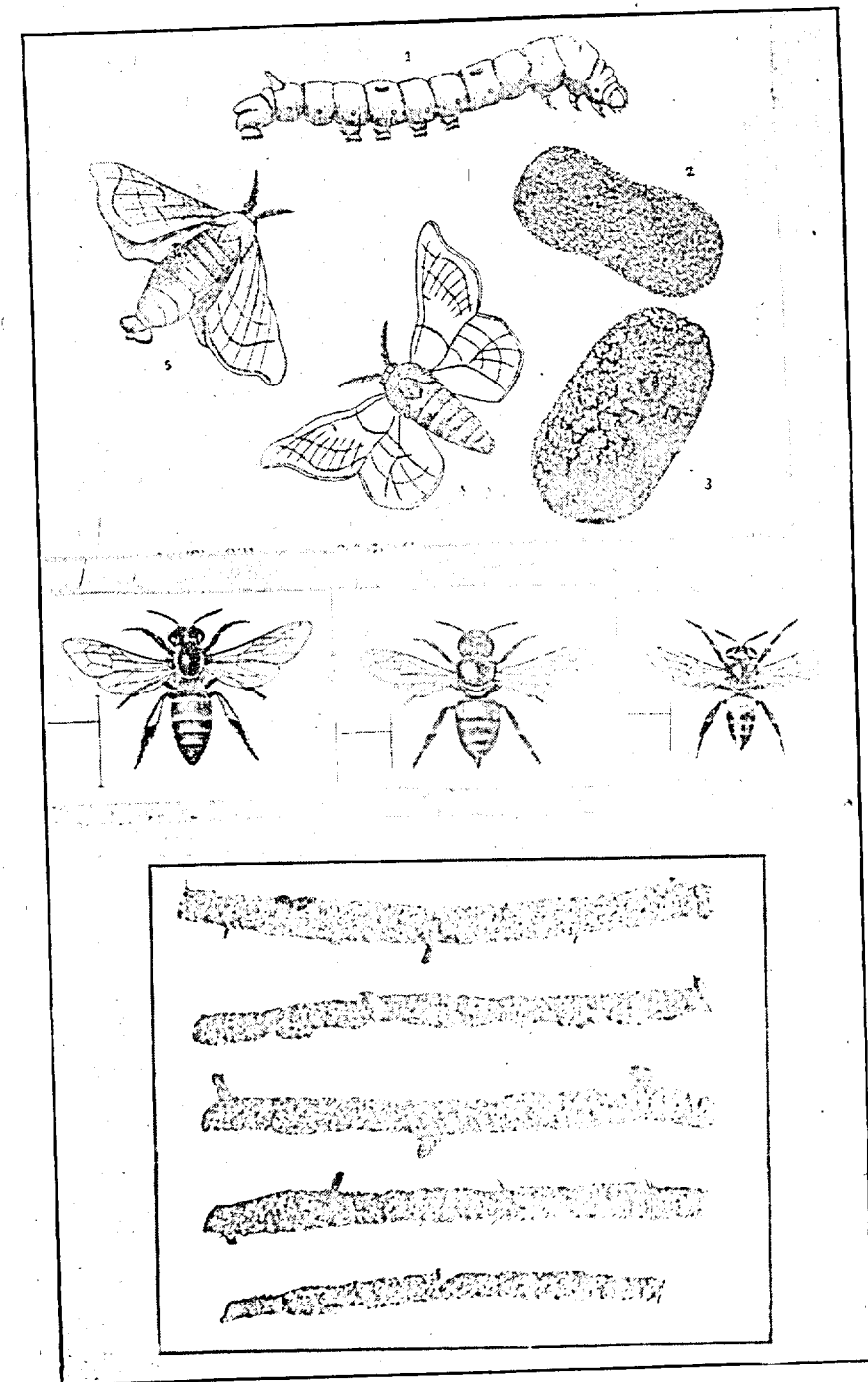
Man's Indebtedness to Insects

By Dr. T. V. RAMAKRISHNA AYYAR

IN India the average man's attitude towards lower animals like insects, worms etc., is generally one of disgust and aversion; most of us consider them as vermin specially created to tease and annoy human beings and as such unworthy of any attention except for avoiding or killing them. This mentality is unfortunately due, among other things, chiefly to the fact that we are only familiar with such troublesome creatures as the mosquito, house-fly or the bed-bug, which affect our person, or with insect pests like locusts, beetles or white ants, which cause injury to our belongings. A good many among us have hardly any definite ideas of the other side of the picture, a more useful and a pleasanter one which supplies us with sufficient evidence to warn us before we pronounce wholesale condemnation of all insects. Many a layman is ignorant of the fact that among these despised lower forms of life there exist creatures which are day and night engaged in labour on the fruits of which man is dependent for some very unique and useful materials—not to speak of the many wonderful and remarkable traits in their life activities which man cannot but envy and emulate. In this paper an attempt is made to give a very brief account of the more outstanding matters in which man has to be grateful to insects.

Of the many useful products which we get from the insect world three substances can be marked out as the most conspicuous and valuable: these are honey, silk and lac. While even the man in the street knows what honey and silk are as the sweetest of sweet things and the finest of fabrics—very few among us possess any clear ideas as to how and from where these well-known materials are got. As to the third substance, lac, even among educated men there are a good many who are absolutely ignorant of what this substance is.

Honey Bees. Though man has domesticated numerous higher animals for his benefit in various ways he has so far been able to domesticate only two forms from among the multitudes of insect hordes; these are the honey bee and the silkworm. Speaking of the former, among insects, in fact among the numerous lower animals, the honey bee occupies a unique position. It has been man's associate practically from prehistoric days. In view of the honey it yields and in consideration of the various virtues displayed by the creature it was not only held by the ancients in



- I. Mulberry silk worm stages: Moths (male & female), the worm & silk cocoons.
- II. Honey bees—the Rock bee, The Common Indian bee & the Small bee.
- III. Palas twigs with lac encrustation made by thousands of the lac insect.

high esteem but was even endowed with divine powers and became the centre for many myths and superstitions. It was probably due to such ideas that the bee was added as an insignia by great men; it is said to appear on the crowns of Egyptian kings, on the arms of the Pope and on the Imperial robes of Napoleon! Honey and bees were attributed divine properties and in Christian rituals honey was given to babies in baptism and the church candles were to be of pure wax! In India, the existence of bees and the usefulness of the products we get from them are facts well known to almost every layman. But very few among us possess any clear and definite ideas regarding the natural history of bees or about the aetiology and purpose of the useful products man gets from them. There are, of course, references in different Indian literary and medical works to honey as *Madhu* and to the honey bee as *Madhu-makshika*, (honey fly). The little that is generally known of the bee may be more or less summed up in these statements: 1. that bees abound in forests, 2. they give us some valuable and useful products, 3. they are a proverbially hard working and industrious lot, and 4. that they sting. All other information regarding them has been practically a sealed book to most of us. The honey bee is, therefore, one of our familiar creatures and yet one about which we really know very little. In India we have three kinds of bees which yield honey; the large rock bee,¹ the medium-sized common bee² of the plains, and the small bee.³ Honey bees, like some other bees, ants and wasps, are social animals and live chiefly in thick forests and wooded areas in large colonies. Each colony or hive is like a city and on the average houses a population of about forty to fifty thousand individuals. In each colony there are three kinds of individuals or castes with different functions and structural peculiarities suited to these functions, viz. the Workers, the Queen and the Drones—the Worker bees making up over 90% of the population. On the Worker devolves most of the important domestic duties of the hive, such as honey and pollen gathering, building of the combs, brood rearing, defending the colony from enemies chiefly by means of the sting it possesses etc. In every colony there is usually only one healthy mother insect or Queen and her function is solely to lay eggs; this egg laying machine is found to deposit two to three thousand eggs a day, and under satisfactory conditions lives from two to three years. The Drones are male bees and very few of them are generally found in a healthy colony and at times not even one. The only duty of the proverbially lazy Drone consists in acting as the Queen's husband, and when a colony is fully populated these unwanted husbands are often driven out or killed! Thus

1. *Apis dorsata*. 2. *Apis indica*. 3. *Apis florea*.

there is a regular division of labour—the Queen and Drone perpetuating the species and the workers doing all the other items of work in the interests of the colony. “The honey bee colony is thus a wonderful republic with a few Kings and only one Queen; the citizens do all the governing without voting, the Kings are powerless and the Queen works as hard as and longer than any of her subjects.” The workers are all immature females and unable to procreate. Various and marvellous are the numerous activities of these workers which go to regulate and to maintain the multifarious needs of the colony. It is these workers that produce wax, gather honey and store it. Honey: The worker bees collect nectar from the flowers of various plants by frequent visits. What we get as honey from the bee hives is not this nectar collected from flowers; this substance is swallowed by the bee, undergoes certain chemical changes inside its body (the honey stomach) and then this changed stuff is vomitted into the honey cells of the hive and it is this latter material which we get as honey—the bee vomit! It is this stuff that is stored in thousands of cells in each bee hive to serve as food, for all the members of the colony and this bee food which is collected by the bees is intended to serve as food for themselves and their offsprings and is not a free gift of the bees to man. Man—“nature’s insurgent son”—possessing the might, merely appropriates the thing for his use!!

In their natural haunts bees live in what are called ‘Hives’ made of combs constructed by members of the colony located in well protected places like tree tops, old buildings, caves etc. Each hive is made up of a number of combs generally remaining parallel to each other. The combs, which are made of wax, are divided up into thousands of hexagonal cells, each comb having a double set of them, one on each surface; and these cells serve as receptacles for the storage of honey and pollen and as chambers for the developing brood. The bee hive, with its remarkable architectural and economic arrangement, is one of the wonders in the insect world. In the words of the great poet Maeterlinck “No living creature, not even man, has achieved in the centre of his sphere what the bee has achieved in her own; and were some one from another world to descend and ask of the earth the most perfect creation of the logic of life, we should needs have to offer the humble comb of honey.” The mathematical accuracy with which the cells are arranged and the way in which the whole hive is constructed are features always evoking wonder and admiration. Adult bees of all the three different kinds when at home simply remain clustering to and moving along the surface of the combs and do not have any special lodgings. Usually the cells in the upper part of the combs are made use of for the

storage of honey and the lower ones are utilised for brood rearing. Wax, which is the material with which these combs are built, is a secretion which exudes as a semi-fluid substance, through some of the ventral plates of the abdomen of the workers and which solidifies into the plastic wax, so ideal a material for constructing the comb. The best stone mason or bricklayer will simply marvel at the way in which the bee removes the wax from its belly, kneads it with the help of its mouth parts and uses it for comb building. During the busy season when cells have to be built at a rapid rate workers gorge themselves with honey and this stimulates wax production. It is said that to get a pound of wax, bees have to consume about 10 or 15 lbs. of honey; as such, comb building and brood rearing go on vigorously when there is plenty of honey available.

Since bees are more abundant in the jungles it is the people of the forest tracts who are more familiar with their activities and conversant with the methods adopted to procure these products. In spite of the fact that these honey mongers of the hills are very familiar with bees and their products, they have absolutely no knowledge of the elementary facts in the natural history of the bees. All they know is that there are certain seasons when bee colonies increase in numbers and when bee hives get filled with honey which they have to appropriate promptly. The methods adopted to get honey are crude, wasteful and barbarous and these apply to gathering of honey from both the rock bee (*dorsata*) and the common bee (*indica*). During nights when the bees are inactive and generally remain clustered on the surface of the hive, burning torches are applied to the hive and in this process most of the bees are killed and many of them badly suffocated; in order to save himself from possible stings during the operation, the man covers his body with a thick sheeting and closes his face with a veil or smears it with ashes to make the stinging ineffective. When the bees are thus killed or disabled the combs are removed and the process of honey gathering starts. This consists in cutting the combs into pieces and then pressing and squeezing every bit of them with the hands and securing the juice thus obtained as honey. Any one with a smattering of insect lore can easily form some idea as to what the components of this liquid are and the degree of its purity. In addition to honey, it contains, among other things, the body juices of the developing grubs in the brood cells, lumps of pollen and pieces of wax from the crushed combs. This stuff constitutes the great bulk of what we get from our bazaar grocers as pure honey, though there are worse substitutes often sold as honey. Gradually, as half civilised man realised the value and good properties of honey, it occurred to some that, instead of searching and

locating bees for honey in the different parts of the hills, the bees may be attracted into some trap chambers and made to build their combs and store honey in them. With this idea the crude pot hives, log hives, straw hives (*skeps*), beer casks and other improvised contrivances came into vogue to breed the bees and this was the beginning of what may be called beekeeping¹ by man; but the methods of gathering the honey continued in the same old crude ways, sacrificing the bees and their combs. It was not until the middle of the last century that some bee keepers in the West realised the cruelty, the economic loss and the impurity caused by the inhuman methods of obtaining honey from the combs. Robbing the honey bees of their stores of honey, which is never intended for man's use, is never a commendable act, but by getting the stuff without smoking and crushing the bees is certainly more humane and the better evil of the two. As a result of the gradual realisation that the existing methods of honey gathering were more or less like killing the goose that lays the golden eggs, hives with movable frames were devised, by the use of which the bee-keeper could gather honey in a pure state and without sacrificing the bees. The introduction of the hive with movable frames is chiefly associated with the name of a clergyman Langstroth, the inventor of the well known standard hive known after him; and if only the bees could talk, they would with one voice express to him their eternal vocal gratitude for rescuing them from practical extinction. Since the introduction of different kinds of hives with movable frames the crude methods of honey gathering have almost disappeared in the Western countries. In India, on the other hand, wherever anything like bee-keeping has been existing, the primitive methods still prevail as in the hill districts of Coorg, Mysore and Wynad. Hollow logs or earthen pots smeared with wax are used as artificial hives and when these are colonised by the bees and sufficient honey becomes stored, the bees are smoked out and the honey squeezed out in the same old way. Within the past two or three decades, however, attempts have been made here and there to rear Indian bees on modern scientific lines. Of the three Indian bees noted only the common Indian bee *A indica* is domesticated to a large extent. The rock bee cannot be domesticated because of its ferocious habits and peculiar methods of hive building.

Apart from their giving useful products like honey and bees-wax bees also help man in acting as marriage priests of fruit and other flowering plants—that is, they act as the agents to bring into contact the male and female parts of flowers (*Pollination*), a process which is highly essential in the case of several fruit trees. Apart from the material benefits we can secure by keeping

1. Apiculture.

bees it is needless to add how educative and inspiring the life activities of the bees are in various ways. Their sense of duty and co-operation for the common good, their unceasing diligence and industry, their wonderful architectural and sanitary instincts and their marvellous sense of domestic economy and forethought, bordering on intelligence, are some of the many features which have, from time to time, been pointed out by poets and philosophers as worthy of imitation by many an erring and wayward man.

Silk. Another important material which we get as an insect product is silk. Though everyone knows what silk is, a great many have neither seen nor even heard anything about the creature whose product is worn with all pomp on ceremonial and gala occasions in the form of sarees, gowns, coats, etc. Let us just see what this material is. Silk is the salivary secretion of an insect known as the silk worm, a fluid which when thrown out and comes into contact with air dries and becomes a delicate thread remarkable for its fineness, strength and elasticity. The primary object of this secretion is to utilise it as the material for building the cocoon or house, inside which the silk worm has to pass its quiescent (pupa) stage before emerging as the winged moth as is the case with all moths and butterflies. It is this material forming these cocoons (silk) man appropriates for his use! The silk worm is the young one of a medium-sized pale, white-winged moth. The moth lays a number of small seedlike eggs from which these worms hatch out; these worms grow to about three inches in length by feeding on the foliage of their food plant and then build these silken cocoons.

In India we have three kinds of silk-worms which are of commercial importance—the best known one is the silk worm *par-excellence*, the one reared all over the world, viz, the Mulberry silk-worm,¹ which feeds on mulberry leaves and supplies the great bulk of the world's output of silk. The others which are of minor importance are the *Tassar*² and *Eri*³ worms. Silk worm rearing (*Sericulture*) is carried on chiefly in France, Italy, Spain, Turkey, Persia, China and Japan and the insect used in all these countries is the mulberry worm only. In India the different races of the mulberry silkworm are reared chiefly in Kashmere, Bengal and Mysore. The silk thread produced from the salivary glands (silk glands) of this worm is found to be produced at the rate of six inches a minute and each cocoon is made up of a continuous thread of silk averaging about a thousand feet in length, and to make a pound of silk about thirty to forty thousand cocoons are found necessary. Our men and women who adorn themselves with silk garments have absolutely no idea as to how many

1. *Bombyx mori*. 2. *Antherea paphia*. 3. *Athacus ricini*.

thousands of these innocent silk worms are sacrificed to pander to their needs. To get the silk of the cocoons reeled into fine silk, the cocoons with the live insects inside are steamed or soaked in boiling water, causing the inevitable death of these creatures, as though a reward or punishment for their labours. This raw silk got from the cocoons by the process called reeling is steamed, purified, washed, colored, spinned, and then woven into garments to adorn our bodies or beautify our homes!

As regards the two other silk worms found in India, one, the Tassar, is a wild one feeding on various forest plants and is not capable of domestication—the hard large egg shell like cocoons of this creature are collected from the forest trees and silk is spun out in silk factories. These are found in many forests of India. The third one found in many places called the Eri worm is one that feeds on the castor oil plant (Erandi or Eri) and is chiefly reared in domestication in Assam, and the silk of this creature is often known as Assam silk. This worm can be domesticated like the mulberry worm and will thrive in many parts of India, especially in moist areas. The silk produced by either of these worms is not so fine and glossy as that of the mulberry silk worm, though quite durable and equally good in all other respects. One redeeming feature with regard to Eri silk is that in getting the silk from the cocoons, the insect need not be sacrificed like the mulberry or tassar worms since the moths are allowed to emerge from the cocoons before the silk is spun out of them.

Lac Next to silk and honey, the insect product of importance and use to man is what is known as Lac. This material has been known to our ancients as *Laksha* and there are references to it in the old writings, like Mahabharata, Sakuntala etc. Very few are unaware of the story of the 'house of lac' built by the Kauravas to be melted down with the Pandavas! But in India, at any rate in the South, very few have any idea of this substance. Lac is a resinous gum-like substance produced by a minute insect¹ found feeding on some forest trees; this encrustation is primarily a scaly covering secreted by the creature to protect itself on the tree. This substance produced by thousands of these creatures feeding in colonies on trees often covers the whole tree and this is scraped and made use of for various purposes. Before the advent of artificial aniline dyes Lac dye (*Loksha rasa*) was in common use as one of the finest of dyes; even some of our clothes in that color are known as *Arrakku* color. Lac is specially used for making what is known as 'Shellac' of commerce. It is used for various purposes, though very few among us realise that it is a product we get from an insect. It is used in making paints and

¹ *Laccifer lacca*

varnishes, filling hollow ornaments, for lacquered ware, corundum and emery wheels, to cover earthen dolls, making gramophone records, as an ingredient in lithographic inks, as sealing wax, imitation buttons, shoe polishes, pottery, imitation fruits, flowers etc.; and shellac is extensively used for electrical apparatus of different kinds. It is also used especially in Malabar as an ingredient in medicated oils and ointments (*kozhambu*).

The lac industry is a very ancient one. In the old days lac was collected from the different forest trees on which the insect was found to feed and multiply. Later on just as in the case of the bees, when there was greater appreciation of the lac stuff and the demand for the same gradually increased artificial breeding of the insect was started and this industry is carried on on a large scale chiefly in Bihar and Orissa and to a greater or lesser extent in Central Provinces, United Provinces, Bengal and Assam; it has also been started recently in Mysore. Of the many trees on which the lac insect thrives and produces good quality of lac there are only three that are really important. These are the Palas (*Butea*) known even as the laksha tree of old, the Ber (*Zizyphus*)—the wild plum tree and the Kusum (*Schleichera*), the lac produced from these trees being called after each tree. This last tree known as *Poovam* in Malayalam is a well known and beautiful tree commonly found along the foot hills of the Western Ghats especially in the South Malabar area. Though all these trees are found in different parts of South India lac cultivation has not been taken up as an industry anywhere in South India outside Mysore. In Mysore the tree used is (*Shorea*) Jalla. The Madras Forest Department has been trying some experiments in this direction in North Salem with some success. The method of lac cultivation is briefly as below. Short lengths of the twigs with mature lac insects on (brood lac sticks) are tied up to branches of trees and the minute offspring emerging from the sticks spread on the healthy branches of the tree feed on the tree sap and start depositing lac encrustation. In the course of four or five months the branches of the inoculated tree, become completely covered with lac. These branches are cut and the lac encrustation scraped for manufacturing different substances out of it. A few branches from the harvested crop containing living insects are again used as brood lac on a fresh set of trees for the next crop. In this way two crops are generally raised in a year in North India and for this two sets of trees are maintained, each set consisting of as many trees as are available in any area. An insect almost exactly similar to the lac insect in habits is the well-known cochineal insect, which is widely used for coloring purposes. It is the one used for some of our silk fabrics known as Araku or Kollegal silks.

The above are three of the outstanding examples of insects to which man has to be ever grateful for the remarkable products they give. There are other minor examples of some insects yielding drugs, ornaments etc. while there are still others which are used as food by various people in different parts of the world. Over and above these benefits which man derives from the insect world are the several wonderful habits, activities and traits in many insects which man could easily and carefully take lesson from for his own benefit, however high in status he may consider himself to be compared to lower animals like insects. And as Riley said:

"If we could put the directing enginery of the human brain in a body like that of the insects, with a hard external shell, at once a defence against external attack and a protection to delicate vital organs, yet allowing free play for every desirable movement; with a breathing system that is diverse and multiple and, therefore less liable to get out of order than ours; with six hands and feet instead of four, with a powerful venomous sting for defence; with the power of flight independent of unreliable machinery; with the enormous industry of an organisation in which each caste or profession is determined at birth and where there are apparently no labour strikes, legislative filibusters or revolutions, but the greatest of self-sacrifice and of loyalty to the commonweal; with a reproductive system capable of producing young at the rate of one per second almost indefinitely, yet provided with efficient birth control when needed; in such a picture we have a creature for which man would be but a poor competitor."

The Trivandrum Plays and the Mrichchhakatika

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I have recently noticed attempts to ascribe the thirteen Trivandrum plays to the time of Chandragupta Maurya, i. e., to the fourth century B. C., and the authorship of the Mrichchhakatika to Simuka, founder of the Satavahana family, who is generally placed in the second (but sometimes also in the first) century B. C. We have, however, to see if there is any evidence of the existence of a developed Kavya style and of the popularity of classical metres and of Samskrita or the refined language in centuries B. C.

The first question is regarding the development and popularisation of classical Sanskrit. It evidently owes its development to the efforts of early grammarians like Sakatayana, Sakalya Panini, Katyayana, Patanjali, Sarbavarman and others. The most important and the earliest extant classical Sanskrit grammar is that of Panini who, however, seems to have been preceded by a number of writers on the subject. But Panini's date is disputed though he should be placed earlier than the third century B. C. It is generally believed that Samskrita is the refined form of the popular speech of Madhyadesa, which seems to have originally signified the upper valley of the Ganges and the Jumna. But it is interesting to note that Panini is traditionally connected with Salatura in the Gandhara region in north-western India. Katyayana is to be placed between Panini and Patanjali. Patanjali is generally believed to have been a contemporary of Pushyamitra Sunga (c. 185-49 B. C.) on the strength of some Mahabhashya passages. But there is reason to believe that they are "stock instances", and that they do not prove Patanjali's contemporaneity with the Sunga king. According to tradition, Patanjali was a native of Gonarda which was situated between Ujjain and Vidisa (Besnagar near Bhilsa in Jubbulpore Dist.)¹. If a tradition recorded in Kalhana's *Rajatarangini* is to be believed, he cannot possibly be placed later than the first century A. D. Sarbavarman lived at the court of a Salivahana (i. e. Satavahana) king possibly of Pratisthana (Paithan in Aurangabad Dist.); he, therefore, seems to have lived not later than the beginning of the third century A. D. It must be noticed here that, according to

1. See Journal, Andhra Historical Research Society, IX, January, 1935, p. 1 ff.

scholars, Sanskrit was not a spoken language at the time of Panini and that even amongst the cultured classes it was not in colloquial usage, but was confined to the grammatical schools. (Indian Antiquary, IV, p. 281).

Now, in spite of the efforts of grammarians, it is clear from the evidence of epigraphy that Sanskrit was not popular as late as the first century A. D. Almost all records, whether of kings or private persons, belonging to a period prior to that time, are written in Prakrit. In western India Prakrit began to be ousted by Sanskrit from the field of epigraphy about the second century A. D., but in southern India it lingered on up to the first half of the fourth century A. D.² Inscriptions also suggest that the cradle of Sanskrit was possibly the north-western part of India, the land of Panini, whence its influence seems to have spread eastwards and southwards. The inscriptional Prakrit generally avoids the use of conjuncts; but they are in general use in those Prakrit records which are linguistically and chronologically nearer the Sanskrit records. It should, however, be noted that the Girnar (Kathiawar), Shahbazgarhi (Peshawar Dist.) and Manshera (Hazara Dist.) versions of Asoka's Rock Edicts—especially the last two—exhibit a tendency to use conjuncts. The language of these versions is definitely nearer Sanskrit in comparison with that of the other versions of Asoka's Rock Edicts. And it is interesting that Sanskrit was first used in the records of kings who ruled in the country with Kathiawar in the south and Ayodhya in the east. It was popularised in northern India by foreigners like the Scythians who came through north-western India, the land of Panini. Inscriptions like those of the Scythian princes, which are written in mixed Sanskrit and Prakrit, prove to be a land-mark in the popularisation of Sanskrit in northern India. Now, these facts possibly go to show that, unless we have proofs of a very positive character, no classical Sanskrit *kavya*—especially *drisya-kavya*, which is meant for the enjoyment of the public—can be safely given a date prior to the birth of Christ.³

Now we may take up the question of the development of classical poetry. Not to speak of a developed *kavya* style, even figurative expressions and long compounds, which are the very

2. See my "Early Pallavas", Lahore, 1935, p. 18 ff.

3. The popular epic literature seems to have been originally in Prakrit; c. f. the case of Jataka literature especially Dasaratha-Jataka, which gives an early version of the *Ramayana*. The *Ramayana*, a saga of eastern Madhyadesa, is believed to have been sung by bards before public gatherings. It could not, therefore, have been originally composed in Sanskrit which was not understood by the ordinary people. The same appears to have been the case with the *Mahabharata*, a saga of the Kuru-Panchala country. It is however, possible that some portions of the original *Mahabharata* was composed in north-western India.

life of classical prose, are conspicuous by their absence in early epigraphic records. Of all pre-Christian records, the Nanaghat record of Naganika, (daughter-in-law of Simuka), which is evidently a *prastiti* of her dead husband, gives an only instance of figurative expression. Epigraphy, therefore, does not support any hypothesis that a developed *kavya* literature existed in the pre-Christian centuries.

A consideration of the question of development and popularity of classical metres also tells the same story. Classical metres like *Malati*, *Pramitakshara*, *Praharshini* and *Vasantatilaka* are no doubt found in the *Mahabhashya* of Patanjali, but, as we have already remarked, it is not at all certain if Patanjali lived in the second century B. C. and not more than a century later. The Junagarh record of Rudradaman appears to refer to the king's proficiency in composing *gadya* and *padya kavyas* adorned with *sabda* and *artha alankaras*. In inscriptions, however, classical metres are found to be used only about the period of the Guptas. These facts appear to prove that such metres were at least not popular before the birth of Christ.

The above facts have led me to believe that no Sanskrit work in a developed *kavya* style can be much earlier than the second century A. D. But the date of a drama or *drisya-kavya* can be looked at from a new point of view. The determining factor in case may be the language and style of the Prakrit portions of a drama which should be compared with the language and style of Prakrit inscriptions. Like royal edicts dramas were, no doubt, meant to be intelligible and enjoyable to the public. At least the Prakrits used in the drama are theoretically in imitation of popular speech. A comparison of the Prakrit portions of the extant dramas and their long compounds with Prakrit records shows that none of the former can be much earlier than the second century A. D., because before that period long compounds were almost unknown in Indian epigraphy. Any attempt to identify the author of the *Mrichchhakatika* with the founder of the Satavahana family would appear impossible, if only we compare the Prakrit portions of this drama with the language of the Nanaghat inscription of Naganika.⁴ It would appear even absurd if we remember the traditions regarding the ignorance of Sanskrit ascribed to the Satavahana patron of Sarbavarman, who could not distinguish between *m-odaka* (no water) and *modaka* (sweets), the Satavahana of Kuntala who ordered exclusive use of Prakrit in his

4. The *Mrichchhakatika* (Act ix) which represents the judge in a court of law, accompanied by a *sreshthin* and a *kayastha* can hardly be a pre-Gupta work. The earliest mention of *sreshthin* and *kayastha* as officials or semi-officials are in records of the Gupta period. See Raychaudhuri, *Political History*, 4th ed., p. 473 n.

harem and the Satavahana king Hala credited with the authorship of the Prakrit poem *Gatha-Saptasati*. The above facts, together with the evidence of the records of the family, which are all written in Prakrit, appear to prove that the Satavahanas of the Deccan hardly patronised Sanskrit literature. At least, under these circumstances, a theory ascribing the authorship of the *Mrichchhakatika* to Simuka must be rejected, unless it is supported by evidence of a very definite character. Similarly a comparison of the style of the thirteen Trivandrum plays with that of the inscriptions of Asoka proves the absurd nature of the theory ascribing the plays to the fourth century B. C.⁵ The theory, however, appears to be based on a supposed similarity between some passages of the plays and some in the *Arthashastra* ascribed to Kautilya, who is generally supposed to have lived in the fourth century B. C. at the court of Chandragupta Maurya. But whatever be the age of Kautilya, the present day *Arthashastra* is undoubtedly a later work. The *Arthashastra* (II, vi) refers to the system of specifying dates in terms of *raja-varsha* (regnal year), *masa* (month), *paksha* (bright or dark fortnight) *divasa* (day). Inscriptions prove that this system was becoming popular only about the beginning of the second century A. D. The system of dating known to Asoka in the third century B. C. is simply to refer to the signal year. A record of king Bhagabhadra (second century B. C.) is dated simply in his 14th regnal year. A little later system referred to the regnal year, *paksha* of the season, and day. Early dates referring to this system show that the year was originally divided into three seasons (*grishma*, *varsha* and *hemanta*) of eight fortnights each. *Sarat* was afterwards added to the list of seasons which had now six fortnights each. This system of dating lingered long in southern India. Mention of the name of months is found only in records of about the first century A. D. The system popular in north-western India during this period was to refer generally to months of the Yavana Calendar and also to Indian months and to the day, without reference to *paksha*. It is interesting to note that dates of records belonging to the Kushana period and found in the Mathura region show a compromise between the old Indian custom of referring to season and *paksha* and the Yavana custom of referring to month. This system, which possibly owes its

5. The Trivandrum plays may be assigned to the Gupta period on the strength of the celebrated verse referring to Rajasimha. The verse mentions a king of northern India whose kingdom lay between the Himalayas and the Vindhya and between the Arabian sea and the Bay of Bengal. Prof. Raychaudhuri seems to be right in identifying this Rajasimha with Chandragupta II Vikramaditya (*Political History*, 4th ed., p. 442n). If Bhasa is the author of the Trivandrum plays, he was an older contemporary of Kalidasa or he died only a little before Kalidasa's rise.

origin to the Yavana custom, seems to have been followed by another system that referred to both *masa* and *paksha*. It should be noted that like Sanskrit this system of dating was also popularised by foreigners who came through northwestern India, and that Kautilya like Panini is traditionally connected with the Taxila or Gandhara region in northwestern India. Kautilya may have been the teacher of an *Arthashastra* school and the author of the kernel of the *Arthashastra*, which, in that case, may have been originally composed in the form of a *Dharmashastra* work, but some portion of the treatise and its form, as we find it to-day are surely not much earlier than the beginning of the second century A. D.

I am inclined to think that the earliest known writer of the Classical *kavya* (including *drisya-kavya*) is Asvaghosha, who is traditionally known to have lived at the court of the Kushana king Kanishka at Purushapura (modern Peshawar). It is interesting to note that like Panini and Kautilya, Asvaghosha too is connected with the north-western part of India and with foreigners who favoured Sanskrit. Asvaghosha lived in the last quarter of the first or the first half of the second century A. D. There is no proof that Classical Sanskrit was popular in other parts of India in his time. It is, however, not impossible that his was not the first attempt to write classical *kavyas* and that in north-western India there existed some works in classical Sanskrit even before Asvaghosha. Theatrical performances, however, appear to have existed long before our first known dramatist; but they were probably like the eighteenth-nineteenth century Bengali *yatra* (half-written and half-unwritten) and Bengali *bhasan yatra* and *gajir gan* (unwritten) of the present day. The age of Sanskrit dramas must have been preceded by centuries of unwritten plays, and possibly by an age of Prakrit dramas, which are now lost.

Sir Mirza Ismail & Modern Mysore

By G. VENKATACHALAM

INDIA is overrun to-day by Ministers and Prime Ministers. You cannot throw a stone these days without hitting one of them. There has been a bumper crop of them in the last one year in the so-called British India. Indian States have always had them under the legendary name of "Dewan". The British Indian breed prefers to call itself "Prime Minister", after the model of the Mother of Parliaments!

Sir Mirza Ismail of Mysore is still a Dewan. He may yet call himself a Prime Minister after the Federation, but to-day he remains a plain simple Dewan. But Sir Mirza is not a Minister of the mushroom variety so common in other parts of India. He was born to be a Prime Minister. Nature moulded him to be an adviser of princes and men.

He has held the exalted office of the Dewan of a foremost Indian State now for over a decade and has made it a "show-place" of India. Sir Mirza is a superb showman.

He is rather an elusive subject for a write-up, this Dewan of Mysore. Not that he is a genius. Oh, no! There is nothing of the superman in him to mystify one. He is about the average-brained man who ever became the most successful Dewan of a premier native state.

Sir Seshadri Iyer was ever so much his superior in intellect, vision and statesmanship. Sir Visveswarayya was any day an abler administrator and a greater constructive genius.

Among his contemporaries, Sir C. P. is a much cleverer man and an astute politician; Sir V. T. Krishnamachari a glorified Governmental Secretary used to the intricacies of red-tapism; Sir Hydari an abler financier and a man of cultured taste; Mr. Gopalaswamy Iyengar of Kashmir an ideal civil servant of the "steel-frame" type; but none of them possess Sir Mirza's passion for industrial progress, love for village upliftment, keenness of international outlook and fondness for modern mechanised methods and unflinching devotion to his sovereign.

Sir Shanmukham of Cochin shares some of these ambitions, but he too has not that Practical-Idealist's outlook and aspiration that are Mirza's strong points.

What is then the elusive thing about the man? It is, I think, his disarming naive manners, his consummate courtesy and



SIR MIRZA M. ISMAIL, K. C. I. E., O. B. E.

diplomacy, his overpolished decorum and deportment. Sir Mirza is a born courtier, and courtiers are ever elusive. He is a man of simple habits, and the simple things of life are always baffling. Sir Mirza is a man of action, and all men of action are puzzling to the extreme.

Sir Mirza is a man of paradoxes. He is an autocrat with democratic instincts; a dictator with a weakness for constitutions; a capitalist with socialistic leanings; an idealist with an intense practical outlook, and a dreamer with the calculating mind of a businessman.

He is a most charming man but a stern and strict official; a perfect host but an indifferent friend. I wonder if among his large circle of acquaintances and admirers he has one bosom friend except, perhaps, His Highness the Maharaja of Mysore!

Sir Mirza started his career under the best auspices, from a worldly point of view. He was a playmate and friend of the Ruler of Mysore and grew up in the atmosphere of the Court. As a young man he became the trusted confidant of the young sovereign and later his Private Secretary. And when the office of the Prime Minister fell vacant he stepped into it with the blessings of the Maharaja and the approval of the Government of India.

The choice was a wise one, and Sir Mirza has justified the confidence reposed in him by his master. He has been the most popular and progressive Dewan Mysore has ever had. No Dewan before him, I venture to think, has taken such a lively and abiding interest in all things concerning Mysore and has been in such close touch with the needs of the people.

He is a real friend of the villagers, and no Dewan before him took that practical interest that he evinces in their well-being. Sir Seshadri and Sir Visveswarayya launched out on very ambitious schemes and aimed at making Mysore industrially rich and prosperous but problems of rural reconstruction, village relief work, city beautification, trade propaganda, social amenities and so forth did not attract their attention. At any rate, they seemed to have been indifferent to the human and cultural elements of their administration.

To Sir Mirza goes the credit of making Mysore a modern state, not only in beautifying the towns and cities to attract tourists, and starting small industries to make the state self-supporting but in trying to improve the lot of the poor peasants and the neglected villagers.

His popularity, at any rate, among the villagers, is not a myth. He is really a very accessible person to all and sundry, and is an

obliging head of a Government. The villager receives the same attention and care as any high official, and he listens to their grievances and demands with patience and understanding, and no red-tape can stand between him and their redresses.

In action he is quick and often arbitrary. He seldom waits to be advised, except on serious constitutional and political matters. In affairs of day-to-day administration he acts and acts on the spot and believes in getting things done. A rare phenomenon in official India where everything moves with the speed of a bullock-cart!

It is amazing the amount of work he gets through in a day, the number of people he interviews and the many functions he manages to attend. He is never in a hurry—there is a certain amount of self-composure and self-assurance about him—and he works to a schedule. A tireless worker, he puts in as many as sixteen hours a day. His hobby is riding and his only recreation.

He is a widely travelled man, and has been to Europe several times, thrice for the Round Table Conference and once in the company of his sovereign, and quite recently he led an All-India deputation to Java.

He does not travel for pleasure or change, which are only incidental and by the way. He travels for the sake of learning, for coming into contact with modern developments in sciences and arts, for enriching himself, mentally and culturally, so that he may give his best to the state.

He is sensitive to beauty and whatever impresses him in his travels, especially in the way of town-planning or garden-laying, is sure to reflect in his beautifying scheme of Mysore and Bangalore, in which His Highness himself takes a good deal of interest.

He is, however, a poor student of architecture, and has no taste for either modern architecture or for old Indian mediaeval style, popularly known as the Rajput style. Mysore is disappointing in that sense. The Palace at Mysore, a so-called Saracenic structure, is a nightmare. It is neither imposing nor beautiful. It is just cumbersome, ornate and pitiful. The Lalith Mahal is a foreign imposition, as costly a farce as some of the buildings in New Delhi. The Town Hall and the Municipal Buildings in Bangalore are just commonplace. The only successful attempt seems to be the Technological Institute, and even that is not specially a fine piece of architecture.

He is no Utopian, this Practical-Idealist Prime Minister of Mysore. He is a realist with an ideal outlook, a man of action

with the vision of a dreamer. His speeches ever breathe the lofty spirit of service and the many practical schemes that he has introduced, during his tenure of office, indicate his ability to carry them out in practice.

Indian States are strangely mediaeval and modern, feudal and fascistic. In political outlook, in social philosophy and economic planning they are far behind the spirit of the time. Backward and antidiluvian as is British India, Indian India is worse. Absolute despotism and autocracy prevail in most of the smaller States.

Even a modern State like Mysore is feudalistic in many ways. The ruler is a wise, kind and god-fearing man, and his advisers have been men of exceptional talent and character. But still the nature of the administration has changed very little. The Prime Minister, in most of these progressive States, is virtually the ruler, and his powers are great and highly arbitrary. Their constitutions are mere cloaks for hiding the hideousness of their fascistic rule, and their councils are mere "talk-shops". Their democracy is a show and an eye-wash.

Mysore may be and, perhaps, is a model State. It is far ahead of Hyderabad, Travancore, the Punjab, the Kathiawar, and the Rajput States, so far as political liberties go and individual freedom is concerned. The Dewan is an autocrat but not so unbending or unyielding as Sir C. P. in Travancore or even Hydari in Hyderabad. One Vidhuraswatham tragedy brought the Mysore Dewan to his senses and made him realise the nature of his folly and the demand of the changing times, while a dozen such incidents in Travancore do not seem to open the eyes of the Dewan of that State to the error of his ways and the inevitable fall of his pride! Things are much the same in other States.

The cost of running the Government in these States is heavy and far beyond their revenues. Mysore, for instance, has a top-heavy administration, almost a disgraceful copy of the administration in British India before the reforms of 1937.

The Head of the State draws a monthly salary ten times more than that of the Congress Prime Ministers in the adjoining provinces, five times the salary of the Premier of Japan and almost twice as much as most of the Heads of the European countries. The civil service is modelled after the British Indian and is almost as highly paid—too heavy a burden for a small territory like Mysore.

It has other costly decorative jobs, like, for instance, the Vice-Chancellor, who gets an emolument twice that of the War Minister in Japan or four times that of the Congress Education Minister, for an hour's work of signing papers and presiding

over meetings. Committees and councils, which are more often mere showy things, cost the country a lot more. And the poor poverty-stricken ryot has to bear the burden of all these administrative *tamashas*!

Modern Mysore is not so model a State, after all, if you escape its superficial attractions and see things a little more closely and clearly. Villages are electrified, it is true, but few village houses enjoy the benefit of their illumination or warmth inside their dark hovels. The lights are for the roads and not for the dwelling places.

Fine metalled roads run all over the State but few villages have drinking wells or healthy sanitary arrangements. There are plenty of lovely parks and flashing fountains but few village industry centres, cottage craft schools, village play-grounds, radios or reading rooms. Poverty, ignorance, disease and dirt still reign supreme in Mysore villages, as in the other seven lakh villages in India.

But it must be said to the credit of Sir Mirza that he has bravely tackled, as an administrator, the one big problem of India, the one real vital thing that matters more than anything else, including that of winning freedom, and more than parks, fountains, roads and buildings, it is this work of the Mysore Dewan which will long endure and his name will ever be remembered by a grateful posterity.

Modern Mysore, which is the envy of the rest of the Indian India, is Sir Mirza's pride and hope, and no one is more zealous of its future and fair name than this Muslim Minister of a great Hindu Kingdom.

Dietary Indiscretions

By A. SREENIVASAN, M. A., D. Sc., A. I. C.



THE food we take in the form of proteins, starches and fats are, in most cases, incapable of being utilized directly by the body tissues. They undergo certain alterations in the digestive tract which render them fit for absorption by the blood and assimilation by the various tissues. The proteins are digested to simpler break-down products, known as aminoacids, the starches or carbohydrates to sugar (glucose), and the fats to fatty acids and glycerine. The substances that are instrumental in the digestion of these food constituents are known as *ferments* or *enzymes*.

The efficiency of digestion is influenced chiefly by (1) the extent of mechanical grinding of the food in the mouth which is dependent upon thorough mastication, and (2) the chemical action of the ferments secreted by glands located either in the lining of the alimentary tract or adjacent to it and with ducts emptying into it. Among the more important digestive fluids are *saliva*, *gastric juice*, *pancreatic juice*, and *intestinal juice*. *Bile* does not contain any enzymes but it facilitates the digestion and absorption of fats.

In addition to the physiological process of digestion, there are certain other external and predisposing factors in digestion which govern health and well-being. One hundred years ago, Brillat-Savarin in his treatise on *The Physiology of Taste* has said: "Animals feed, man eats, the man of intellect alone knows how to eat". Too many of us to-day are simply *feeding* and it is best to remember that the normal functioning of our digestive apparatus may be easily upset by dietary indiscretions. We shall examine some of these here.

Psychic secretion and Nervous indigestion. Of all bodily functions, the process of digestion is, perhaps, the one which affects the moral state of any individual most. We become sad, gay, talkative or morose according to the condition of our digestive apparatus and yet we least suspect the cause!

From time immemorial it has been known that the very sight and odour or even the thought of delicious food makes the mouth water. This secretion of the salivary glands takes place as a result of psychic stimuli. The glands of the stomach can also be similarly stirred into action. The famous Russian physiologist and Nobel Laureate, Ivan Petrovitch Pavlov, showed clearly that

the "appetite juice" or psychically stimulated gastric juice serves to start digestion on its way. "It acts somewhat like kerosene on wood in a cold stove. Without it the fire would eventually get started, but with it a half hour of blowing and waiting can be saved".

Even as secretion can be induced by pleasurable emotions, it can be stopped by unpleasant or distressing ones. Some of the effects of emotion on the digestive tract have been carefully studied by recent investigators and it is generally agreed that the secretion of the digestive ferments are largely controlled by nerves. The man who sits down for a hearty meal immediately after an exhausting exercise or work often suffers afterwards from some kind of stomach trouble or other. Similar failure of digestion can be observed when food is eaten under psychic strain as in "banquets, at political meetings, or in homes overshadowed by illness or death". The most plausible explanation is that fatigue and excitement dry up the all-important ferments. Since the secretion of the digestive ferments are controlled by nerves, such indigestion is referred to by Dr. Alvarez as *nervous indigestion*.

Nervous indigestion can be got over only by getting sufficient rest and sleep, by avoiding worry and annoyance, by securing out-door exercise, fresh air and mental relaxation and by eating slowly and thoroughly chewing one's food. Frequently it is most advisable to postpone a meal until strong emotion has passed, fatigue has lessened and the "psychic juice" restored.

Food Allergy: Allergy is the capacity to react to many substances which are entirely innocuous to normal individuals. Many foods act as poison to some individuals; in other words, the subjects are hypersensitive or *allergic* to these foods. Food allergy can be acquired at any time during life from over-indulgence in specific foods or from the intermittent taking of certain unusual foods. The most common articles of food that produce allergic reactions in many individuals are raw milk, eggs, fish, coffee, wheat, onions, cucumber, tomato, melon, cabbage, nuts etc.

Hypersensitivity to foods is more frequently the cause of disturbances in health than is commonly realised. Hay fever, asthma and allied disorders may result from food allergy. It is held that the disturbances in allergic patients are brought about by foreign proteins getting into the blood and circulating in the tissues because there is an insufficiency of the protein-splitting ferments in the blood. The ideal method of controlling allergy will be to avoid completely all contact with the specific allergens and also through a total change in environment.

Appetite and hunger: Scientists tell us that hunger is accompanied by certain contractions of the muscular stomach wall and

that these contractions are associated with the secretion of adrenalin from the ductless glands. This, in turn, may be due to a falling off in the level of sugar in the blood. The whole mechanism is very complicated. We only know that every normal person experiences appetite but it is only the starved individual who knows hunger. There are, of course, normal variations to be expected in our appetite and we should treasure our appetite by keeping it within limits by neither denying nor satiating it. Appetite may, however, become abnormal in three ways:— (i) lessened, (ii) increased, and (iii) perverted.

Diminished appetite: Among the chief causes of lessened appetite may be mentioned worry, irregular eating, general loss of condition from overwork, lack of exercise or loss of sleep, ill-balanced diet, gastric abuse by excessive indulgence in alcohol or use of other irritants and general disease. Loss of appetite, indigestion and distaste of food are often only friendly warnings and, if ignored, will result in serious ailments. Diminished appetite can be corrected by proper attention to one's eating habits.

Over-eating: A definitely increased appetite occurs in some diseases, such as diabetes and exophthalmic goitre. Apart from this, a number of people develop the habit of eating much more than they really need. This is especially so with sedentary workers at or past middle age when creature-comforts come to appeal more and more and pleasurable indulgence appears to be more man's desire. Of these latter, eating is one of the foremost. Coupled with this development is often a growing disinclination for active exercise. Thus it is that those who have never been worried by a lack of appetite become sometimes a prey to the insidious fault of over-eating.

Over-eating is an important factor in the causation of high blood pressure, diabetes, gout or other kindred ailments. Even if these diseases do not develop, a state of impaired health and decreased efficiency is bound to result. Putting more girth in middle age is partly due to over-eating; the tendency to drop off to sleep after lunch is also due to this, although a certain laxity of mind is normal after a meal. Digestive disorders are also encouraged by too much eating.

Moderation or restriction in food habits should be vigorously advocated for middle-aged people with sedentary occupations. Such moderation practised should be an all round restriction and not the faddist's exclusion of a particular food. Diets with a preponderance of highly refined foods should be substituted by others containing more of the "protective foods".

Slimming by diet: It is a modern craze to reduce weight by dietetic restrictions. It is reasonable to curtail food intake for people who, by reason of obvious over-eating, have gained much weight. Apart from this and, especially for younger people,—slimming in itself is a bad and often dangerous practice. All are not—luckily—cast in the same mould and there are people who are perfectly healthy in spite of remaining slim. Likewise there are others who are naturally stout. For the former, to fatten up would mean a change in their make-up or definite over-eating, while “slimming” for the latter would necessitate a process of starvation. Many are the disasters to be attributed to this bad practice, not the least of which is said to be a predisposition to tuberculosis. There is one rule which these people who desire to slim themselves may well bear in mind, viz. the minimum amount of weight for a given diet is gained if the diet is perfectly balanced and a perfectly balanced maintenance diet is the minimum amount of food that can be taken with safety.

Diet and the mal nourished child: It is often supposed that under-nourishment in the child generally exists only among the poor. No doubt, poverty and disease are prominent factors; nevertheless, malnourishment is often observed among the children of the wealthy and well-to-do. The condition of the malnourished child in such cases is generally attributed to heredity. How often do we not hear it said: “He is just like his father”? But, according to Dr. Lydia J. Roberts, “It is not always ‘fatness’ as such which runs in families; it may be merely good cooking, hearty appetites and good digestion; family thinness can often be explained solely by the fact that all eat at the same table. A child of a thin nervous mother who has a small appetite may also be thin and nervous and be a light eater. He may even like and dislike the same foods, but environment, rather than heredity, may be the entire explanation.”

In the case of under-fed children, the most important nutritional factor is a lack of sufficient calories, but in other misfed children the limitations may be in vitamins and other mineral elements resulting out of an insufficiency of fresh fruits, vegetables, milk and egg in the daily diet. Another important factor that must not be overlooked is that through excessive attention and consequent over-urging on the part of the parents, the child may develop a “negativism” towards food in general or towards some particular food, because of an invincible desire to do just the opposite of what he is told to do.

Some dos and don'ts: It is easy to promote good digestion by regular habits and by carefully chosen diets. The following

rules are based on a discussion by Dr. L. Jean Bogert in her *Nutrition and Physical Fitness* :—

Cultivate a cheerful frame of mind as well as peaceful and pleasant conditions at meal times.

Take your meals at regular intervals. It is usually well to make the midday meal somewhat lighter and the evening one somewhat heavier, where the normal routine calls for active physical or especially mental work in the afternoon and for relaxation in the evening. With children and adults whose afternoon schedule is not taxing or who go early to bed, it is better to have the heavier meal at noon.

Do not eat between meals. This does not hold, of course, for invalids and for others in illness when smaller portions of food may have to be given at frequent intervals.

If for any reason your digestion is not in order or if you are under unusual conditions of strain or fatigue, take only liquid foods or small amounts of very easily digestible foods until the difficulty is set right.

Eat slowly, enjoying your food and chewing it well; at the same time do not get fussy about your food or think too much of how it will affect you.

Do not eat too many foods at one meal or indulge immoderately in some favourite food.

If you know that a certain food is hard to digest, take a relatively small amount of it or eliminate it entirely. A “smooth diet” is one from which fibrous, cellulosic and other coarse food is excluded.

Do not eat within two hours of going to bed.

Get plenty of exercise and fresh air.

An occasional variation from the correct regular dietary habits will do little harm.

Lastly, never be misled by single-idea enthusiasts. There is no royal road to health; there is only one guiding principle—moderation!

The Future of Evolution

By ANIL KUMAR SARKAR, M. A. (Gold Medalist),

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THE modern age is an age of novelty, an age of greatness and of beauty. It tells everything in a new, beautiful and splendid way. The apparent material world signifies a spiritual world. The world of facts tells us of a world of values. Science hints at philosophy and religion. The natural processes or flows suggest to our mind a creative evolutionary process, which tends to realise some values in different levels of existences. The existences, as they appear to us, are 'emergents' telling us of new 'emergents'. The evolution is evolution of organisms, to new and complex organisms. The atoms, the old material atoms, have become wave-packets, new organisms giving rise to living existents which dart towards mental existents, and which again tend to achieve 'social organisations' indicating to the world that there is what is known as the universal principle of co-ordination which abhors all disorder and chaos. The world is darting towards a realm of beauty, a realm of novel organisation. It is trying to level up human reason to the worship of a realm of values. The guiding force of the principle of co-ordination will be love and sympathy. A new world, an 'Utopia' for mankind, is not far to reach. The "vision splendid" is not far-off. This is the future that the modern concept of evolution gives us to understand. It hints at a world of values, it demands a faith in a Supreme Directive Force, it wants to achieve a New Religion.

The scientists, in the warmth of their research, have found a universal purpose in the realm of nature. It is for this reason, Mather boldly says that consciousness is an expression of Cosmic Energy. Millikan says that we must aim at a higher ideal, for the world is 'incurably religious'. Curtis adds that our concept of God must change and become nobler with the growing nobleness of man. Conklin, in his observation of biological sciences, says that without a faith in the Superhuman Power, man will descend to a 'slough of despond', and 'nirvana' will be the only goal for man. The universe is no doubt expanding, but that has not dwarfed the soul and mind of man. The real dignity of man consists not in the origin but in the realisation of what he is, and what he is to become.

It is for this reason Einstein says that man must not follow a God of fear born of human frailty, he must not worship a moral God who rewards and punishes the objects of His creation, but he must have a feeling for the marvellous structure of the universe, which will reveal to him a feeling of the mysterious, which is the true "Cosmic Religious Experience", the true scientific religion which guides us and instils in us faith and conviction in our many failures of our scientific research. It is the noblest driving force that the materialistic age can confer on us. Julian S. Huxley thinks that the approach to the level of man means an overcoming of the great barriers in the natural evolution, and on coming to this level we must drive towards the realisation of values which constitutes the true religion of man.

Thomas White Patrick, marking the great change in the vision of the twentieth century, says that evolution is creative up-building process, it is not a rearrangement of a throng of lifeless atoms, but the awakening of them into a world of living, feeling and thinking forms. It is not necessary to read back the ideal values into the physical units out of which the world is made. The ideal values are new creations, special creations. They are realised through the process of evolution. As to Aristotle, so to Patrick, this vast realm of evolving organisms is nothing but the realm of novel realisations. So the evolution here, is a 'gospel of hope'. It is an organic creative evolution. It represents growth and progress—a purposive movement. It tells that life, mind and values are realised in evolution. In coming to human level, it tends to realise the 'social organisation' where love, sympathy and justice reign supreme—a perfect Platonic world of ideal values.

The creative evolution, thus given to us by Patrick, reminds us of the Creative Agency of Lloyd Morgan, which he calls, God; it also calls to our mind the 'Elan Vital' of Bergson, and the 'Directive Force' of Boodin. John Burroughs calls it the 'Organising Principle'. It tells us that the future of mankind, which is aiming at an ideal world, demands a total collapse of the present world of imperfection. It hints at the emergence of an ideal world, which will foster a new sort of devotion, a new religion of mankind. This is the same as the principle of sublimation, as McDougall hints at, that works in the evolutionary process. The highest sublimating force is God. So Thomson says the largest fact in Organic Evolution is the growing emancipation of the mental aspect of life so long sleeping.

This is further realised when Pupin says that the 'Creative Human Soul' is trying to realise itself further as the principle of

creative co-ordination, and making both the world of physics, and of mind a vast realm of Cosmic Realisation. It aims to reach a 'Social Cosmos', a universe of love, which is the principle of co-ordination in the spiritual world. This drift is a drift towards mental attitude.

This hint at the Purposive Agent by all the eminent scientists and philosophers of our days clearly marks that the 'Future of Evolution' is towards the realisation of an ideal realm of values, which cannot stand without a faith in 'Religion'.

ST. MARNOCK AND THE BLACKBIRD

St. Marnock:— I've traversed tractless lands forlorn
O'er stormy seas my ship has gone.
Yet never have these longing eyes
Beheld the earthy Paradise.

The Blackbird:— The daffodils bloom row on row
New green the budding fern-fronds show
How lovely is this flowery dell
'Tis Heaven in its heart to dwell.

St. Marnock:— I hear a blackbird's merry singing
The glade with the gay notes is ringing.
He sings how Spring makes all things bright
With verdant leaves and golden light.

The Blackbird:— O joy! to live when all grows new
Now earth glows green and skies shine blue
Here is my nest: 'tis Heaven for me
To feel the Springtime's ecstasy.

St. Marnock:— I thank Thee Lord that thou hast sent
A bird to teach my heart content
His carol shows me Paradise
Shines here, and all about me lies.

—Rev. F. H. Aldhouse.



By Nicholas Roerich.

"CHINTAMANI"

The Mortal Foes of Mankind

By K. GANAPATHI, M. Sc.



FOR man — provided he is not a saint or a philosopher — there is nothing more precious than his own life. Though for him, unlike in some lowest forms of life, death is one of the biological necessities, yet he abhors anything that tries to snip his "thinspun life". In this old world of ours wherein the struggle for existence is shaping the order of things, there are many living species thriving, which are singularly unfriendly to man. Among these, the worst enemies to mankind are those pathogenic micro-organisms which are responsible for the premature and unnatural deaths of thousands of innocent souls every day—or else, how can the present average age of man in India (which is about twenty) be explained when his normal life is known to be about a hundred years long?

Though the present day politicians and economists paint in horrid hues the disasters of wars which occur just in a way, they are, in reality, very trivial when compared with the perennial sabotage going on in far greater magnitude every day through the agency of the micro-organisms. In fact, it is reckoned that about 100 million souls have been killed in all the wars from 1800 A. D. up-to-day, including the Napoleonic and the Great Wars. The position will be clear if we just compare this with the annual death-rate in British India alone — leaving aside the rest of the world — which is about $6\frac{3}{4}$ millions, it being remembered that only a small fraction of it is due to natural death i. e. old age. In spite of all this, we are never alarmed at the last mentioned situation though, ironically enough, any gossip or a bluff about a war is enough to shake our nerves. This attitude is current because we are never educated to appreciate the real situation that only these pathogenic micro-organisms are our mortal foes, working every minute for our ruin without our knowledge. Instead, as a habit of thought and immediate experience, man considers only his brother man his mortal foe!

The discovery by the remarkable genius, Louis Pasteur, that the germs are responsible for and carry the disease, is hailed as one of the greatest of all times in the history of Science and it is said that, by this discovery, he saved more lives than Napoleon took in all his wars. If only the truth and significance of this discovery be brought home to each and every one in this country, we could have done a great deal of service to humanity in our attempts towards the alleviation of human suffering. It is, therefore, imperative that each and every one should be conversant

with the life history of these micro-organisms responsible for the diseases to which the human beings fall victims.

These microbes are of different types, as the protozoa, bacteria, viruses etc., but here we will consider only the bacteria whose life history is very interesting.

The bacteria are the oldest and smallest of the living things belonging to the vegetable kingdom which play a remarkable role in the economy of living organisms. They are so very tiny that it is scarcely possible to see them by the naked eye except by very powerful microscopes. Each bacterium is about one twenty-five thousandth of an inch in diameter and about three to eight times in length. They are of different shapes, some round (*cocci*), some wriggling (*spirilla*), and some looking like rods (*bacilli*). Some of them arrange themselves in characteristic ways or patterns, some growing in chains, some in bunches, and some in mosaic forms. They are, as expected, very light, about a thousand million (1,000,000,000) of them weighing just a milligram.

The one remarkable thing discovered about the bacteria and also the protozoa, which also gives a great amount of food for thought from the philosophical point of view, is that there is nothing like natural death with them as is known in the case of human beings and other animals. In the case of human beings, however much they take care of themselves, they have to age and finally die. But in the case of the bacteria, if you take care that they do not meet with any adverse influence, they will go on multiplying indefinitely! This rather strange thing is just a consequence of the simplicity of their mode of reproduction which requires no complicated sexual machinery. A single bacterium grows to its full size and then divides transversally into two. "There is nothing lost in this process, there is no corpse, no new born infant—the one old individual has simply become two new individuals". This process goes on about every ten minutes so that reproduction takes place at a terribly immense rate in geometric progression. In about eight hours, the progeny of a single bacteria, on the average, would exceed 16 millions and if the multiplication continues for two days more at the same rate, the resultant volume of bacteria so produced would form a mass some hundred thousand times the size of the earth!

Nature, wisely enough, always keeps order by having a firm control over such an exorbitant multiplication of the bacteria which, if left unchecked, would bring very disastrous results. So it is, we find, that these are very susceptible to destruction by even such mild agents as strong light, sunshine, warm temperature, chemicals etc. The bacteria die only by such means and accidents. Even under very favourable conditions, only 80 per cent. of the bacteria survive and reproduce. With these very common agents

antagonistic to their well-being and reproduction, in Nature the bacteria undergo a very critical struggle for existence and in the long run if their species have not become extinct, it is only their phenomenal power of reproduction that has kept them up.

One of the factors which help the bacteria to survive the adverse conditions is their capacity to change their nature and become 'spores'. These 'spores' are apparently dead forms which have got the remarkable power of resistance to heat and cold. An organism which can pass through fifty to eighty generations in one day and is also easily killed by warm water, can, by a peculiar power of nature, change themselves into 'spores'—just as sages are told in myths to do—which can stand boiling water for some hours, keep in liquid air (that is about -200°C) for six months and survive if undisturbed, in that state for thousands of generations of its normal life—a remarkable feat of *yoga* indeed! Such a spore, apparently dead, once it meets with a favourable circumstance, comes to its original form and begins its routine of multiplying.

It is one of the well-known theories, popularly attributed to Darwin, that during the passing of generations in the process of evolution, things so adjust themselves according to the conditions and circumstances as to evolve a better race. In the case of the bacteria, which pass through hundreds of generations in one month as man will in thousands of years, we find the changes in their form and behaviour (mutation) quite pronounced when gradually subjected to conditions they are unaccustomed to. Therefore, it should not be remarkable that a class of bacteria which by nature can give rise to only blood poisoning and child-bed fever, can by a particular method of cultivation, be changed into a group which will produce pneumonia or, one which secretes a terrible poison in the blood stream of man can be modified into another without this poison. This interesting phenomena has, in fact, been made use of in treating many dreadful diseases in man.

These bacteria are, indeed, very queer beings and accomplish things in their daily routine which are very odd to us. Some bacteria want oxygen for life, some do not want them and others can go without it, though normally they require it. Some others require very odd and obnoxious gases like ammonia and sulphurated hydrogen (the gas from rotten eggs) for breathing. A group of them can live in the dark without light. They do not want complicated things for food as man. They eat simple chemicals and excrete complicated things which prove to be of great service to man. They can produce living things out of the dead so that it is contended that bacteria or some other organism of that sort is just a link between the living and dead matter. Some bacteria eat bricks and turn barren rocks and mountain peaks into soil

which, in turn, is enriched by some others for man to reap a luxuriant harvest. They turn fruit juice and sugar into wine and convert milk into butter—cheese itself is a mass of bacterial bodies! Thus, in their attempts to live, the bacteria do a lot of good to humanity and it is but simple truth to say that they are absolutely indispensable to man and the economy of nature.

There is also the other side of the picture which concerns us directly more than the former. Just as in the human beings there are very good and also very wicked men, among the bacteria also there are some which do great service to man and others which are inimical to man by attempting to kill him and other animals by way of diseases. The bacteria which are very inimical to man are so not because they want to be so—as a matter of fact they detest it—but only things cannot happen otherwise. In their attempts to make friends with man, by just entering his body as a guest, they turn out parasites to make their living. This happens somewhat in this manner.

There is one type of bacteria—saprophytes—which can lead an independent living and only these prove to be of service to man. There is the other type—parasites—which, either out of their laziness or incapability to make their own food, cannot thrive outside the animal bodies. These hungry pathogenic bacteria are present in the air, the dust, dirty places, slums, even in our throats and stomachs, and when conditions are favourable—i. e., when a man becomes weak or loses his resistance—they enter his body and begin to colonise him by multiplying. Voluntarily or involuntarily, they secrete, during their living in the palatial human body, into the delicate system their products which are very virulent poisons to him. By the gift of Nature, man has in him, to some extent, the power to produce within himself some bodies which can neutralise the poisons of the bacteria and also keep in check their multiplication. Thus a sort of terrible struggle is going on within the human body between the bacteria which attempt to multiply and the man who tries to check their growth, each making use of all the strategic methods at their and his disposal. This struggle, though actually invisible, can be recognized by the effects or results produced—the man gets temperature, headache and other things which are well known to us as symptoms. The abnormal state into which the individual is now launched, is called the diseased state and the sum total of these effects described can be called disease. Each type of bacteria produces a particular kind of effects in man, which collectively are connoted by the name of the disease—e. g., pneumonia, tuberculosis, leprosy etc. (In fact the surest method to recognise the type to which the bacteria belongs is by such pathogenic effects). In this struggle, if man gets the upperhand, the bacteria perish

and he recovers: on the other hand, if the bacteria succeed, the man collapses and woe unto the bacteria because it has to quit his corpse and seek a new host. We can thus understand that disease—which is Nature's method to restore the man to his normal condition—and the phenomena associated with it, are just the effects produced in the course of the complex communal existence adjustment in which the poor bacteria (which cannot thrive outside the human body) is trying to colonise the human body unaccustomed to accommodate the guest with its unusual qualities.

Leaving aside this philosophical outlook and our sympathies to the poor bacteria, let us come to practical politics. It is true that the bacteria, are, indeed, very fatal to the normal life of man. Our attempts should, therefore, be directed to plan a method by which we can keep them from visiting us and, if they visit us, to see that they are summarily driven out. To succeed in these, the chemist and the man of medicine have done a vast deal for which we should feel indebted to them.

The "political gangsters", who by their desperate attempts to keep up their self-interest and false prestige create wars among their brethren, have forged the popular mind to condemn the advancement of Science that it has resulted in intensifying the dreadful nature of the wars. (We should anyhow be thankful to them that till now they have not traced the causes of wars directly to Science). Let them think in their calm and sane moments what their positions will be without the present day advancements of Science. Let alone the comforts and luxuries they are enjoying, they should remember that medicine and its mistress, chemistry, have done a great deal to stop the wars between the microbes and human beings—in comparison with which the war between human beings is just a mimicry—and, as far as possible, bring victory to human beings even in very hopeless situations. It may be said with truth that, in the history of our times, there are no more inspiring chapters than those which record the victories of medical science over diseases. It will appeal better to the present day politician if it be disclosed that the Panama Canal is one of the economic monuments of that medical discovery that the mosquitoes are responsible for malaria. Fifteen years ago it was observed by some eminent man of Science that if a specific could be discovered for diseases like pneumonia, puerperal fever and tuberculosis, medicine will bring to mankind more of good than the League of Nations—and all the peace talks could be hoped to bring. To-day, as a result of the researches carried on by chemists and medical men in recent years, part of the dream has come true. We wish the scientists all success in this noble mission, at least in our own interests.

Who is an Educated Person ?

By Prof. DIWAN CHAND SARMA, M. A.



London weekly has recently been conducting a symposium on the question of what is an educated man, and to its columns philosophers, men of letters, politicians, educationists and business-men have been contributing their views on the subject. Yet fortunately or unfortunately no two persons have agreed. Each has gone his or her own way in defining and describing an educated person, and each has indulged in flings on the present educational system to his or her heart's content. Still we cannot blame these writers for not arriving at any agreement about an educated person and for not sparing the educational system of their country. The educational system, whether in England or elsewhere, is always a handy subject for those who wish to indulge in vituperation or condemnation, and education has been so varied and elusive that it has defied comprehension. I do not believe the results would be different if one were to ask some of the politicians, the men of letters, the leaders of industry and the philosophers in India to answer the same question. Perhaps here we would get as conflicting answers as were received in England.

Let us for a moment imagine who would be an educated person, according to Mahatma Gandhi. Mahatma Gandhi would think that only he could be described as an educated person who believed in nonviolence and truth, who could spin and who could convey his ideas in spoken as well as in written Hindustani. I hope I have not misrepresented Mahatma Gandhi in this matter. I have said so in the light of what Mahatma Gandhi has sometimes written about education, and after taking into account his Wardha Scheme of Education and his recent pronouncements on University education. I am sure Mr. Shastri's answer to this question would be quite different. Perhaps according to him, an educated person would be one who can argue and discuss, and who has a balanced mind and a refined taste. A philosopher like Dr. Bhagwan Das would look upon education as the hand-maid of civilisation, especially of ancient Aryan civilisation. He would expect an educated person to be well versed in the wisdom of the ancient Aryans and to be able to bring his serene wisdom to bear on the problems of the day. Some of our leaders of industry would think that an educated person must have a practical sense and must also possess the spirit of adventure. Some of our politicians would believe that an educated person should be able to vote the right way; that is to say, he should be a good citizen.

As regards our educationists the less said about them the better. They would discuss more enthusiastically the details about the schemes of studies and the examinations than the qualities required of an educated person. Recently an Indian scholar lectured somewhere in England and said that education should teach us all about the visible and the invisible world and therefore an educated person should be well versed not only in the humanities but also in the occult sciences of the east and the west.

How is then one to know what an educated person is? Perhaps one might say that it would be possible to get some light on this problem from Newman and Huxley. This is what Newman says:—

That perfection of the Intellect which is the result of Education, to be imparted to individuals in their respective measure, is the clear, calm accurate vision and comprehension of all things, as far as the finite mind can embrace them, each in its place and with its own characteristics, upon it. It is almost prophetic from its knowledge of history. It is almost heart-searching from its knowledge of human nature; it has almost charity from its freedom from littleness and prejudice, it has almost the repose of faith, because nothing can startle it; it has almost the beauty and harmony of heavenly contemplation, so intimate is it with the eternal order of things and the music of the spheres.

According to him, education is not merely a kind of gymnastics but a kind of well-balanced and well-proportioned intellectual discipline. It enables us to see things from the right perspective and to understand them judiciously. An educated man knows history, psychology; he is attuned to what is great; possesses faith and commences with this universe as well as with the spheres above. His knowledge brings him wisdom, faith, charity and love of beauty and harmony. In other words, an educated person is a kind of philosopher who sees farther and deeper than other persons, and who can contemplate the spectacle of life with equanimity and faith. But, as we know, it is as difficult to be an educated man in the sense in which Newman intended it as to be a Yogi in the sense in which Lord Krishna meant it. Let us, therefore, lay aside this priest-philosopher and turn to Huxley for guidance. Says he:

That man, I think, has had a liberal education, who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of the tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself.

According to this an educated person should have perfect health of body and mind, a well disciplined intellect and well governed passions. He is a person who loves beauty of all kinds and hates to enslave other persons. In this description of an educated man we do not find any clear cut statement about our civic or international duties. The virtue of respect for others is emphasised but is too vague and indefinite. Still we find that this man of science is more precise than Newman. Into his conception of education enter the training of the body, the discipline of the mind, the acquisition of beauty and the development of one's conscience.

But one cannot help feeling that though the men educated according to these schemes would find individuals refined, considerate and tolerant, they would not be fit for the helter skelter of the life of to-day. They would feel ill at ease in this world of crude violence, of strident nationalism, of blind state worship and of insensate economic struggle. If an exponent of authoritarian education were asked to paraphrase the words of Huxley, he would do something like this. He would call that man educated whose body is the ready servant of his Leader, so that it can perform with machine-like regularity all the services that are expected of him by his Leader. His intellect is clear only in so far as he can understand the orders of his Leader clearly and unequivocally and who can carry out all his biddings in small things as well as in great things. For instance, he would be ready to lay down his life if his Leader so wills, which is a great thing. But he would also be prepared to take his hand in those voluntary organizations which the State has devised for social welfare. His mind is stored with knowledge but not the knowledge of laws of nature but with the slogans which his Leader has coined. He is an ascetic because like a Leader he practises some kind of self-denial. (If he were in Germany he would not marry a Jewess even though he was passionately fond of her because the Leader has willed it otherwise.) But he is full of life and fire. So full of life that he would deny the privilege of living to those who did not agree with him, and so full of fire that he would blast all the enemies of his race and state. He has passions but they are not the servants of a tender conscience but those of his Leader. At his bidding he would love his country with the ecstasy of a saint, and if he desires he would be capable of devastating hate. He has a vigorous will, but that will is subordinated to the will of his Leader. He does not love all kinds of beauty but only particular patterns of it which are approved by the state. He respects himself, but he has no respect for the aliens living across the borders of his own country. He hates

vileness because most of the things outside his country appear to him to be vile.

But this kind of exclusively patriotic and submissive attitude may not be the distinguishing mark of an educated man in a state which is not totalitarian. Yet we will call that person educated who has mastered the art of living. He knows how to keep his body in perfect condition, and has sufficient will to hold fast to those things which agree with him and to avoid those which do not suit him. He has evolved such a daily routine for him as enables him to do the maximum work and enjoy the utmost leisure. He need not be a faddist or an ascetic but needs be a discriminating lover of life and of the world and of the things that it holds. Even when he takes the pleasures of life, he does not take them sadly like an Englishman but in moderation as the ancient Greeks did. In other words, he is a man not only of physical vitality but one who knows how to conserve it.

If the secret of his being on the physical plane is vitality, the secret of his mental energy is concentration, he can apply his mind fully to the work in hand and can do it with the utmost efficiency. He does not suffer from absent-mindedness or slackness of mind and can bring all the resources of his mind to bear on a particular task so that it is performed with the utmost ease. Similarly on the moral plane he practises same principles. He is tolerant of others. As he wants other people to let him mind his business, so he lets other people mind their own business. He loves peace but is not afraid to face a crisis. He keeps his form under all circumstances and loves the best in this world. He has the two supreme virtues of magnanimity and courage, and is capable of making a generous or defiant gesture at times. In the daily routine of life he gives play to the spirit of accommodation and practises good temper on all occasions.

But he is not merely a self-centred individual, one who lives only unto himself. He is a man of broad sympathies and is especially determined to do something for the under-dog. He is a person who feels the burden of his civic responsibilities. His conception, however, of civic duties is not merely passive; that is to say, he does not merely believe in knowing the law and obeying it. He is an active citizen who believes in improving and bettering the place where he lives, the town to which he belongs and the country of which he is a citizen. Whenever the need be or whenever the occasion arises, he can make sacrifices in the cause of his country and for the good of the people.

An educated man knows how to make use of his leisure. He does not fritter it away in idle pursuits or in uncreative

mentally recreation. He makes use of it to renew himself physically and spiritually. From it he gets a new reservoir of physical energy, a new stimulus for mental activity and a strengthening of his moral impulses. Through his recreation, as through other things, he promotes his body culture, his mental culture and his soul culture.

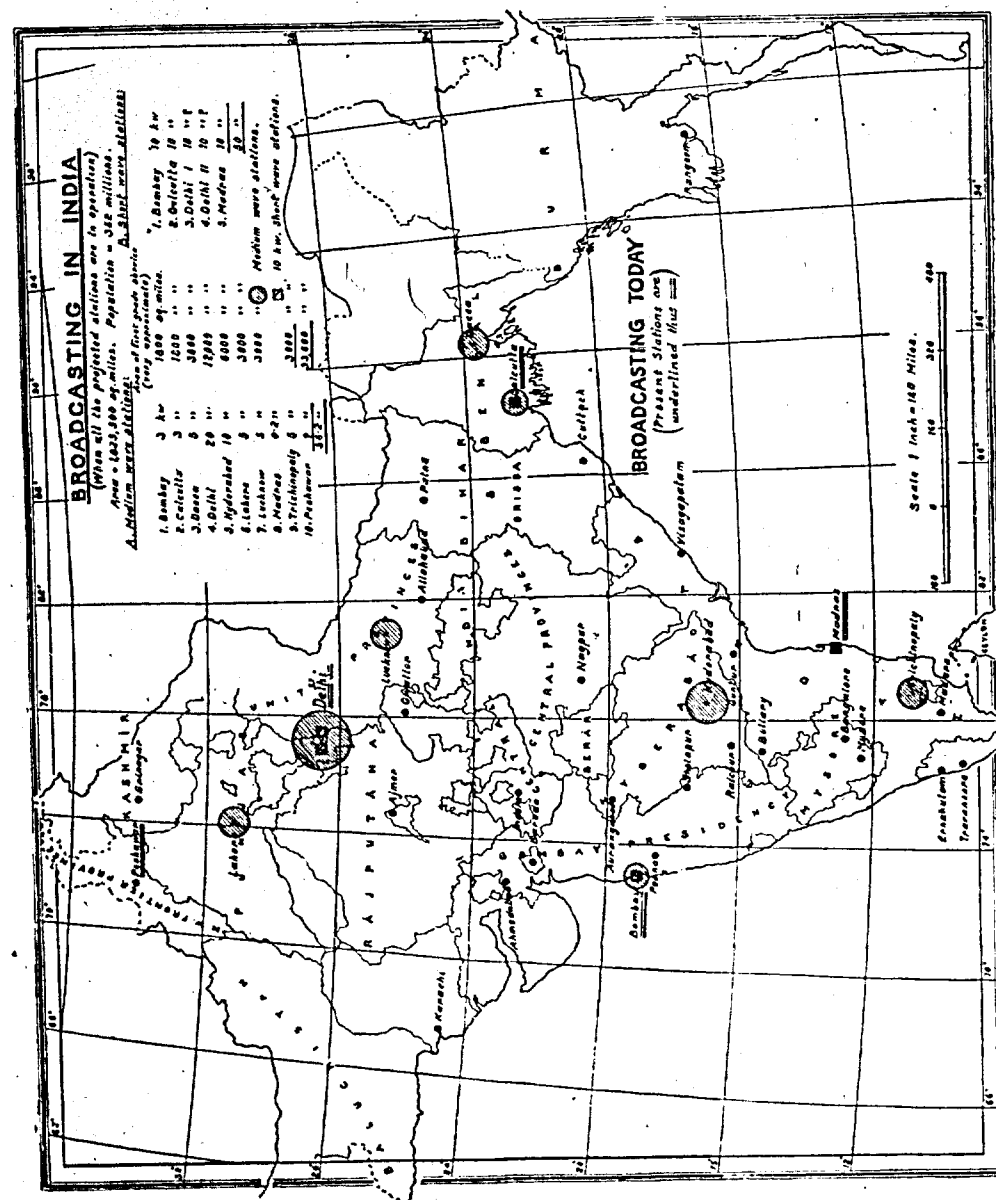
But the educated man is no narrow-minded patriot. He knows how to reconcile the claim of the country with those of the world. He does not believe in racial hatred, and he does not want that he should be a party to this subjugation of a weak and defenceless nation. As in his private and domestic life or in his civic life he practises the motto of 'Live and let live,' so in other matters he acts upon the same principle.

TO KUEN—LUN

In a former life you were the poet LI—PAI and learnt Taoism from the Sennin, Tai—I, on the summits of the Kuen-Lun mountains.

The pale rays from the setting sun fall athwart the autumn foliage, and the poets dwelling seems itself supernatural.

—Barnett D. Conlan



Wanted a Broadcasting Commission*

By K. SREENIVASAN, B. Sc. A. I. I. Sc.
Indian Institute of Science, Bangalore.



HERE can be few countries in which broadcasting is so paramount a necessity as India, on account of the backwardness and poverty of the great mass of the people. A closely-knit, advanced and industrious population needs it much less than we do.

It is wrong to think of broadcasting as an extravagance or luxury which should await drastic improvements in the economic and general living conditions of the people. It cannot be too strongly emphasised that money and effort devoted to a well-planned countrywide scheme of radio broadcasting are among the wisest and most economic of investments by the country for the all-round advancement of the people.

It is the cheapest, most universal and effective instrument of all for unifying our vast and varied population in common citizenship, for the promotion of the health and the moral and material advancement of the people and for the spread of healthy entertainment and general culture among them. These have to be with reference to the mass of the people in the villages.

The welfare and progress of the village population should at every stage and always be the inspiration and the touchstone of all broadcasting activities throughout the land. Everything else should be subordinated to it and of secondary importance.

In spite of its importance and urgency, India is among the most backward countries as can be seen by a glance at the phenomenal progress and present status of broadcasting in Europe, America and Japan where it has become an indispensable dynamic social institution.

Europe, excluding Russia, with an area roughly equal to that of India, has over 275 transmitters with a total antenna power in excess of 6,000 kw. The corresponding power of the 560 transmitters in the U. S. A. is nearly 2,500 kw. Starting in 1926, Russia has now some 75 transmitters. The number of receiving sets is 25 millions in Europe, 21 millions in the U. S. A. and over 3 millions in Russia.

Let it be remembered that this broadcasting development took place during a period of economic distress and political

* Reproduced from *Illustrated Weekly of India* of 28th March 1937.

upheaval in Europe and America at least as acute and widespread as any in India.

The progress of broadcasting is nowhere so remarkable as in Russia; from a position of complete insignificance in about 1925, Russia marched up in less than a decade to a position in the front rank of the world. In the area of the country, its population, variety of races and languages, and cultural, social and economic divisions of the people, Russia offers the nearest parallel of all to India and Indian conditions.

It is of no small significance that all this remarkable progress was achieved shortly after Russia had gone through the fiery ordeal of the greatest and most drastic revolution in history, at a time when the whole world was against her, including some of her own population.

The Bombay and Calcutta services were started in 1927. The next seven or eight years were a period of utter stagnation in technical services, deterioration in programme quality, decreasing listeners, diminishing revenues and universal apathy, ignorance and lack of vision, all linked together in a vicious circle.

On one occasion at least, there was serious uncertainty regarding the existence of the service itself.

The action of the Madras Government in initiating an examination for developing a service in the presidency and the allotment in two equal instalments by the Government of India of a total sum of 40 lakhs of Rupees for broadcast development were the first indications of an arrest in a situation which had become a disgrace to the country.

These have been followed by the creation of a broadcasting department and the inauguration of the 20 kw. Delhi station. Since the advent of the present Controller of Broadcasting, the programme day of the three stations has increased to a little over eight hours (Bombay 8 hours, Calcutta 8 hours and Delhi 10½ hours); programmes have improved in variety and quality.

A noteworthy experiment is being conducted from the Delhi station of special transmissions for an hour every evening exclusively for the surrounding village populations; the bi-monthly programme periodical has undergone vast improvement.

A programme of construction of four 10 kw. short wave and four 5 kw. medium wave stations has been worked out and sanctioned. The first of these is expected to be ready in another six months. It is very satisfactory to note that they will all be of the best and most up-to-date type and will use efficient antenna systems.

Located in or next to cities with considerable populations, the eight stations will, with suitable programmes, help to build up nuclei of listeners, augment the broadcasting revenues and thereby help its extension and improvement. They will be useful in stimulating the demand for the rapid penetration of radio facilities into the regions most in need of them, namely, rural India.

Further, the number of registered listeners has increased from 12,000 in 1933-1934 to over 28,000 in 1935-1936. During the same period, expenditure on broadcasting has risen from 3.3 lakhs to 5.8 lakhs of rupees; and revenues from all sources have gone up from 5.4 lakhs to 14.3 lakhs of rupees. Welcome to the paying listener is the recent announcement of reduced licence fee, if paid early.

The Hyderabad state is developing a scheme of its own; a 10 kw. medium wave station is in course of construction at Hyderabad and three of 5 kw. will be put up at different centres in the State. The governments of the States of Mysore, Travancore, and Cochin have set up committees to devise schemes for their areas.

These are very welcome evidences of re-awakened active interest in broadcasting in India and augur well for the future.

But broadcasting is inherently a nationwide and national problem and can only be dealt with on the basis of the organic unity of India. Equal technical facilities and services of the highest possible standard and efficiency should be provided for every part of the country irrespective of geographical situation and political or other artificial boundaries. The idea of favoured regions, and therefore of neglected areas, is out of the question.

Broadcasting cannot be dealt with piecemeal and more or less independently by the numerous political units in accordance with their individual inclinations and resources; that will certainly result in unequal and unfair distribution of radio facilities and waste and confusion, if not worse.

There is no alternative to the centralised organisation of technical and engineering services, as in the case of the Department of Posts and Telegraphs.

Secondly, the people and the State should be increasingly educated from the outset to realise that a satisfactory broadcasting system for India of even the most modest character will cost a great deal in money and effort. The idea that it can be managed at small cost is utterly fantastic; it is a disservice to broadcasting in India to underestimate its financial commitments, and operating capital.

The allotted sum of 40 lakhs of rupees, perhaps satisfactory to meet the requirements of one of the minor provinces, is miserably inadequate even as a modest beginning for this vast and thickly populated sub-continent of the size of Europe without Russia. Expenditure on broadcasting in some of the minor European countries is much greater.

The present short-sighted and penurious attitude of the Government in India should rapidly give place to wide visioned and informed outlook and generous support if India is to benefit by broadcasting. An assured capital grant of 50 lakhs of rupees a year for ten years will be a truer and more accurate measure of actual requirements.

The legislature and the executive think nothing of years of patient, organised effort and the expenditure of vast sums of money in carefully planning and executing huge schemes of irrigation, hydro-electricity, railways, and educational and industrial development schemes of all sorts. The people and the Government have become accustomed to large expenditure on these almost as a matter of course, particularly during times of economic distress.

As a beneficent and nation-building activity, broadcasting is of at least as vital importance to the welfare of the mass of the Indian people as any that can be thought of. Yet neither the people nor the Government take it seriously; until they do, it will be merely an unnecessary and rather expensive toy.

The projected programme of eight stations forms the starting step to a national scheme. If it is to fulfil its basic purpose of serving the mass of the people in rural areas, the broadcasting system of India should be designed and operated to guarantee reception of the best entertainment value in the remotest hamlet anywhere in the country at all times of the day and throughout the year. This should be not on expensive receivers which few people can afford, but on modest receiving equipment within the capacity of at least the comparatively well-to-do inhabitants of the villages.

National coverage of even the most unpretentious character will require some ten times the present projected number of stations, each roughly as powerful as all the eight put together—the whole system to be inter-linked by high quality land lines for the interchange of programmes and for the purpose of national hook up.

It will then be a question not of selecting this or that frequency for any given transmitter, but of using to the best advantage each and every transmission wavelength—long, medium,

short and ultrashort—that India can secure by international discussion and agreement.

The technical and engineering aspects of broadcasting in a country like India are most complicated. They include:—

(a) The number, power and types of transmitters, their frequencies and their locations.

(b) The system of inter-linking land-lines for control and exchange of programmes and for network broadcasting.

(c) The location of studio centres, their size and scope, equipment and technique.

(d) The types and costs of receiving equipment, their manufacture, maintenance and operation.

(e) Development and research in regard to the numerous aspects of materials, apparatus, technique and operation from the microphone at one end to the listener's loudspeaker at the other.

These and many other questions will have to be tackled on a well co-ordinated and organised basis to guarantee to the Indian listener the best, the most efficient and economic engineering services in the world.

Of the most vital importance to the healthy and vigorous development of broadcasting in India is the question of its organisation and the method of financing the service. The country is immense in size and has a most varied population of over 350 millions.

The number of main languages, let alone the innumerable dialects, is embarrassingly large. The population is everywhere of a very mixed character in regard to language, religion and cultural, social and economic development.

As if these were not enough, there are the complications due to the artificial political divisions in the form of hundreds of feudal states of all sizes, with each ruler vehemently insistent on his so called sovereign rights.

In these circumstances, how is broadcasting to be organised? The highly centralised system as in Germany, Great Britain, etc., is out of question. Equally so is the private commercial type flourishing in the U. S. A. and one or two other countries. A *laissez-faire* policy by which each of the numerous political units in India can develop broadcasting services in accordance with its desires and resources will quickly lead to confusion and chaos.

The best arrangement will be to centralise all technical and engineering services to secure uniform radio facilities throughout

the country as in the case of the posts and telegraphs department and to decentralise and "deofficialise" equally thoroughly the programme services in each region.

In considering the question of finance, the unreasonable and and fantastic idea that the service should pay its way, and that too right from the beginning, should not be entertained.

Broadcasting is a combined universal university and theatre of the air. It is in the same category as educational and public health activities; nobody has at any time suggested that these should be self-supporting.

The contribution that broadcasting can make to the improvement in health, wealth and culture is the first and most desired return that it can give.

To the revenues derived from licence fees and customs duties on imported radio goods, the State should contribute in adequate measure to assist rapid extension of the service and ensure progressive improvement in its technical excellence and programme quality.

The contribution from the Central Government should be devoted to the engineering services. Those from the provinces should be spent wholly on the improvement of the regional programme service and the maintenance of the community receivers in rural areas. Thus will be assured the active zeal of both the central and the regional administrations.

At present, the Central Government makes a profit of several lakhs of rupees a year from the broadcasting service instead of turning over the whole amount for the extension and improvement of the service. After this, who can have the heart to accuse the Government of excessive enthusiasm for broadcast development?

Problems relating to programmes are easily the most troublesome of all, particularly in India, where the tastes and requirements of the different sections of the community are so different and vary so markedly from one region to another—the proportions of different types of music and radio drama; the role of radio in education, public health and industrial development; the place of religion and contemporary politics; the problems of labour, women and children; the type and extent of social, economic and national propaganda and controversy; the correct balance between rural and urban requirements; on these and many others, there will always be differences of opinion. The assistance of liaison bodies like listeners' committees, programme advisory councils and periodical regional and national conventions

should be taken to ascertain public tastes and requirements to shape programme policy from time to time.

A broadcasting service, in the final reckoning, is judged by the degree of interest, appreciation and enthusiasm that its programmes attract and retain among all classes of the population. Alert and sympathetic responsiveness to public comment and criticism should be the underlying keynote of its policy and daily activities.

In any broadcasting service worth the name, direct expenditure on programmes accounts for the major part of the broadcasting revenues.

One of the major causes of the backward state of broadcasting in India is the total absence of a radio manufacturing industry in the country capable of supplying the requisite receiving and transmitting equipment, particularly the former. It cannot be too strongly emphasised that an efficient Indian radio manufacturing industry is the backbone of Indian broadcasting. It is impossible and intolerable to build and maintain a broadcasting system with imported materials and apparatus.

In a very striking address delivered at Bombay, a little over a year ago, the present Controller of Broadcasting made an eloquent appeal for the development of an Indian radio industry to meet the special requirements of the Indian market for receiving sets. He emphasised the vital role of cheap receivers in the progress of broadcasting in India and urged their manufacture in the country instead of allowing the trade to get into the hands of foreign firms.

There is little indication of any response to this excellent appeal. Why should this be so? Are Indian industrialists so lacking in enterprise in a field full of promise? Nor is there evidence of any serious attention to the vitally important question of the evolution of family and community receiver types specially suited to conditions in India and to the Indian market. Apparatus designed and constructed for the conditions and circumstances of Europe, America and Japan are not really suited to India. It is, to say the least, most strange that this problem, work on which should have started years ago, remains really untouched to this day, long after the Government published their programme of transmitter development.

Work on a well co-ordinated, co-operative basis should begin without delay; it will be in the best interests of the listeners, the broadcasting organisation and the radio trade. To delay or postpone action till after the projected stations start working will be the exact reverse of wisdom and foresight.

In spite of the advanced status of broadcasting in Europe and America, the manufacturers continue in their unremitting efforts to produce better and cheaper types of receivers for the different sections of the population. There is the noteworthy example of Germany. In 1933, at the demand and under the stimulus of the State, the broadcasting organisation, and the various manufacturers and investigators co-operated together in developing the notable "Volksempfänger" or the Peoples' Receiver. The very modest price of about 70 marks immediately resulted in a striking increase in the number of listeners, and in badly needed improvement in the radio trade. The "Volksempfänger" stimulated the sale of the more expensive receivers as well.

The example of Germany has now been taken up by several other countries. The Ullswater Committee of Great Britain perhaps had in mind the achievement in Germany in recommending the development of moderately priced receivers.

Nor is this all. It is not more than two years ago that Europe and North America began thinking actively about a public television service. But for many years before that, many manufacturers and others have been vigorously active in developing suitable apparatus and technique for transmission and particularly for reception. And since the official inauguration of the television service, these efforts have been intensified to produce television receivers which are reliable, satisfactory and reasonably priced. Europe and America did not wait till the broadcasting and the television transmission services were in full operation before commencing investigations into the question of suitable receivers. Receiver development must be in advance of the extension and improvement of the transmission service.

From every point of view, the broadcasting problem in India is too vast and complicated a problem to be allowed to develop by itself without careful previous planning. It is of too vital a concern to the ordinary citizen to be left entirely to the judgment and discretion of ministers and departments of State, no matter how zealous, experienced and capable they may be.

The country is entitled to insist that it should be furnished with as precise information as present circumstances permit regarding (a) the scope and magnitude of a nation wide broadcasting system; (b) an estimate of the necessary capital outlay and annual expenditure; (c) proposals for the organisation and financing of the service on an all-India basis; and (d) a programme of development for the first few years.

This should be preceded by a thorough study of the history and present status of broadcasting abroad, to profit by the

experiences of other countries and to assure the maximum chances of success and the minimum of failure.

Let India be alive to the wise procedure adopted by other countries at important stages of their broadcast development. Take the excellent example of Great Britain. In the short space of a dozen years, there have been four Government committees. The first one was set up in 1923 to tackle the question of the financing of broadcasting and was presided over by Major-General Sir Frederick Sykes, ex-Governor of Bombay. In 1925, the question of the re-organisation of broadcasting arose and it was entrusted to a committee appointed as before by the Postmaster-General and presided over by the Earl of Crawford and Balcarres. It was in the recommendations of this committee that broadcasting ceased to be a profit-making private commercial enterprise in the form of the British Broadcasting Company and was converted to a monopolist type of the public utility service under the title of the British Broadcasting Corporation.

Much later, before inaugurating a national television service, a thorough investigation of the whole question was conducted by the Selsdon Television Committee (1935) which visited several European countries and the U. S. A. to study at first-hand the status and trends of television development. Last year (1936) the Ullswater Broadcasting Committee was set up to go into the whole question of the future conduct of the broadcasting service. It was on the recommendations of this Committee that the charter of the British Broadcasting Corporation has been renewed for a further ten years.

There is also the example of Canada. When in 1929 dissatisfaction regarding the broadcasting service became keen, the Federal Government went in for a thorough investigation of the question by appointing a commission presided over by Sir John Aird. This Commission visited the U. S. A. and a number of European countries and produced a report which focussed public attention on the problem and provoked keen discussion. The subsequent developments, including the formation of the Canadian Broadcasting Commission, trace their origin to the Aird Commission and its report.

A carefully chosen compact Broadcasting Commission of inquiry and investigation should tour Europe and America on a well thought out itinerary to study all aspects of broadcasting and of the radio industry and to make recommendations for their development in India with special reference to the first few years. The cost will be negligible, perhaps a lakh or two lakhs of rupees; and the procedure will neither hinder nor delay the present

programme of construction nor affect the daily conduct of the present service.

The report of such a Commission will give definition and direction to the objective; it will provide a lead to the country. There will be confidence that the whole region has been surveyed and mapped out with care, that the track is well marked and well prepared and reasonably free from pitfalls and unknown dangers, with the ultimate result that the country will march forward with firm steps, free from doubt and hesitation, knowing whither it is going and with fair confidence of reaching the appointed goal.

The report will focus public interest and attention on the subject and provoke widespread thinking and discussion in press and on platform, in legislatures and other meeting places. Nothing better could happen to assist forward broadcasting in India.

To the ministers, administrators and engineers the report will be a tower of strength; they can proceed, with their great and beneficent work happy that their ideals and hopes are shared by the public; that their plans and programmes are known and understood; and that their work and activities have the approval and confidence of the people. The whole country will then share the responsibility in the execution of the plans and in the conduct of the service.

Eurhythmics

A Necessity in Girls' Education

By MAGARET E. COUSINS, B. MUS.



ANYONE who travels up and down the world making racial comparisons knows that the health of the girls of India is lamentably below the standard of the health of girls in any other country. It is also considerably below the strength of even their own brothers. Parents, teachers, professors, doctors, political leaders, are not sufficiently concerned about the wrong being done to the nation both present and future by this state of affairs. People in homes know it, girls themselves weep about it, but nobody "hollers out" about it, as the Americans say. If things are allowed to go on as they are today about this matter, with the average age of death 26 for an Indian while it is 52 for a European, the fate of Indian wives and mothers of even ten years hence is indeed unenviable, and it will be the fate of India to be eliminated in the struggle for the survival of the fittest.

The lives of Indian girls between ten and twenty years of age are simply "arrested developments". Social customs force them into exaggerated awareness of their sex. Conservative and stupid prohibitions of "manners" make them pay more attention to their sex than to their fundamental humanity and its physical and psychological needs. "You should not run and leap and do vigorous exercise because you are a girl", people say to the girls of eleven and upwards. Why, this is the age when girls need even more strengthening and hardening of physique than even their brothers, because the burden of continuing the race will be theirs in the later years! Apart from that a girl has the duty to be strong for her own individual sake, and for the happiness of good health and all-round fitness.

Improved and compulsory daily physical culture for girls in schools and colleges in every class is the first step necessary to be taken to raise the health standard of India's womanhood. Twenty years ago the physical education of boys was as much neglected as that of girls is to-day, but now the educational authorities have insisted on the inclusion of properly organised team games, periods of drill in all time-tables for boys and as far as I have seen they are well carried out. But the same needs for girls are hopelessly neglected. A women's Training School for Elementary Teachers that I know is a case in point. It has not even a playground large enough to contain a badminton court! There are attempts to have some drill classes in girls' schools, but the

subject is not treated seriously or scientifically as is done in boys' schools, (of course with notable exceptions, especially in the Maharashtra side). Indeed, there are thousands of girls' schools in small towns and villages which have no playground at all, or inadequate open spaces, and no indoor hall, either, available for such necessary exercises!

Because marriage and motherhood are earlier in India than in other countries it is all the more necessary that in the few years of school education every facility and organisation should be given priority of importance to enable girls to have plenty of fresh air, every kind of hygienic education, and the enjoyment of co-operative games. The social customs and poverty will tie up these young women all too soon within the four walls of their houses.

I am entirely and enthusiastically a supporter of co-education, but an argument against it to-day in India is the way the girl students in co-educational schools and colleges are, in the great majority of cases, allowed to do without physical exercise.

When the bell for these classes rings boys troop off merrily but girls go to indoor sewing or sit about doing nothing. In every case any proportionately equal amount of money is grudged for providing full equipment, time in the curriculum, and the separate services of the physical instructor for the girls. I am revolutionary enough to claim that if one side or the other ought to have the particular attention in this question nowadays it should be the girls, as boys now have developed the taste for the open-air games and there is much leeway to make up for girls. It is not always desirable to have girls between 12 and 14 exercising with the boys. This will prove one of the problems of the Wardha Scheme. We women must insist on the drill period being devoted to the girls rather than to the boys if a choice has to be made in this matter.

With regard to the system of physical exercises which girls should be taught, there are many alternatives. Hinduism has wisely linked its systems for developing the body to reverential worship of the Gods of its Pantheon and with spiritual psychological science, also with the expression of religious praise and happiness. Thus first were organised the ancient temple pradakshanam, the dandis and buskies formerly practised by Hindu women. Then there were also the early morning Suryanamaskars, and the 108 prostrations. Nothing in rhythm could be more basic than the well-known pranayama (breathing) exercises and the yogic asanas (postures) which can be acquired by girls as easily as by boys. These are individual attainments of the more austere kind whose apex of beauty and ecstasy is the Tandava, the Dance

of Natarajan. Certain educational institutions, such as the Madanapalle Theosophical College, and the Haridwar Gurukula, have complete Courses along these lines of which a few girls have taken advantage. They should be widely encouraged.

There is the collective aspect of this type of dedicated physical culture in Indian life ranging from the primitive folk-dances of peasants, Limbadhis and Santals, through the Kolattams of children and marriage parties, the Garbha dances of Gujarat, the Krishna Lila Dances, and the Kathakali of Malabar, right up to the most advanced expression of emotion in human plastic material through the movements of hands, head, feet, limbs and facial details.

There is found a rhythm, a melody, a significance of gesture capable of performance by the individual and by groups of individuals to suit every grade of ability.

The return of rhythm to its place of power in the Indian social life is one of the most hopeful advances of these days. India providentially has not been an exception to the response of the nations of the world to the renaissance in dancing. Especially is the Indian Classical Dance, the Bharata Natya, coming into its own. Training in dance forms necessitates control, concentration, memory, gracefulness, health.

Today's new fashion of learning dancing is particularly valuable for securing the interest of the Indian girl in the improvement of her physique, and it should be taken advantage of to the full. The more it is encouraged in its collective form the better, for the greater the number taking part in the rhythmic expression, the greater will be the courage induced to bring it to its highest perfection, the less there will be of personal self-consciousness, the more the group-consciousness (so necessary in every aspect of India's life today) will be established, the more powerful will be the evocation of health and harmony.

One of the most pleasant memories I retain of my life in a boarding-school in Ireland is that of 80 of us resident girls trooping nightly into the big gymnasium after our 2½ hours of silent, supervised study; and there finding release and warmth and unlimberment of body, mind and emotion in a half-hour of dancing waltzes, jigs, quadrilles, etc., until our blood tingled and we went off to bed with our complexes danced out, our shoulders straight, our spirits lifted above the intellectual grind of the long day.

The use of marching rhythms, and the singing of songs with strongly marked rhythms by the whole assembled school is quite general as the opening exercise of western schools. Nothing

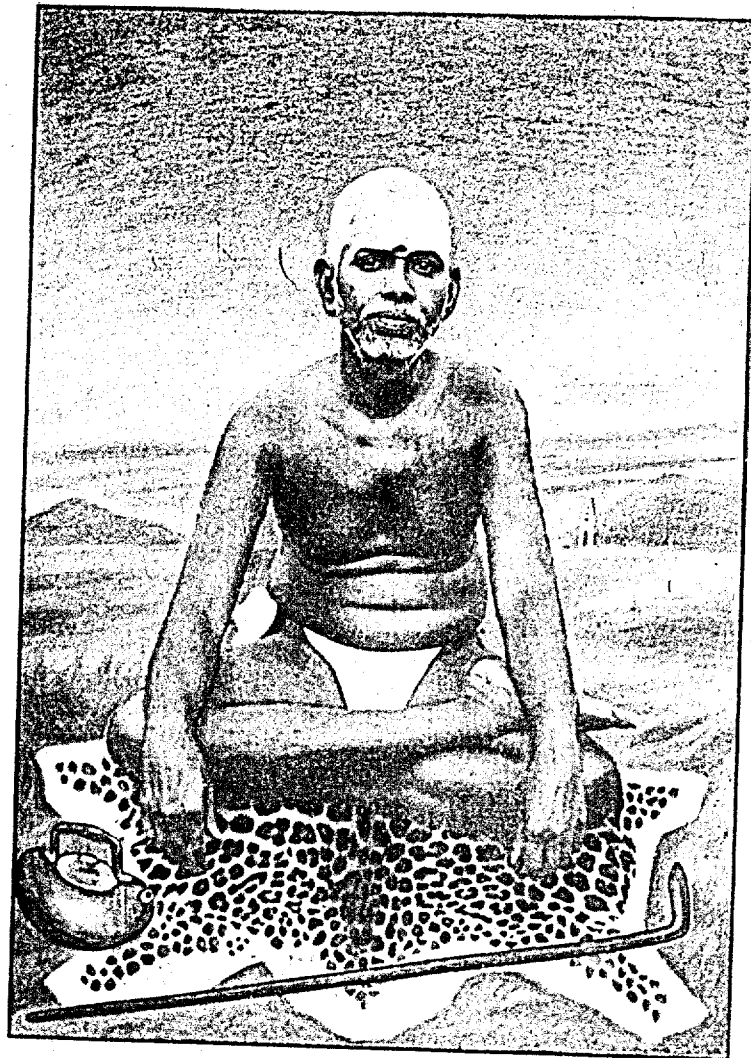
wipes out so effectively the heterogeneous background of the varied homes from which the pupils come, and substitutes a homogeneous condition of unified receptivity for the day's instruction and discipline.

In Travancore this month I have been thrilled and impressed by the traditional use of a folk-dance performed to personate in action the evocation of health previously demonstrated in the beauty of designs by which a large representation of the Goddess of Small-pox is portrayed on the whole floor space in rice powder coloured dark red, yellow, green, black and white accentuated with outlinings of stringed white jasmines and pink lotuses. The brilliant crown had one gleaming great sunflower as its central point. It seemed to shed rays of life-giving sunlight. First that transient floor picture imposed on the spectators and on the other its rhythms of colour and design-motifs as a charm against disease. Then a dancer in costume swept away the whole portrait into one small inchoate heap of powder and blooms, and the dancer himself took up the representation of the similar sway of rhythmic force through a dance of much technical skill and vigorous and dramatic action to the accompaniment of drums and cymbals till the air seemed aswirl with induced vitality which should be a store-house of anti-toxin to attacks from any malignant disease germs. These ideas and art-crafts should be applied to creative exercises for girls in schools and colleges throughout India to give them an armour of good health, pleasure and hidden power.

The Bratichari movement is doing similar common-sense magic in Bengal for village adolescents and adults.

The art of rhythm evokes vitality. This is why the Bharata Natya, both solus and in combination, is so desirable for inclusion in the curricula of school and college for Indian girls.

It is also true that there is some deep correspondence between the nature of the rhythm and the quality of the vitality induced. Jazz rhythms produce an increase of physical and rajasic vibration, while the more complicated and intellectual rhythms of Hindustan create a movement towards spiritual liberation and towards universality, which in the life of students expresses itself as good comradeship, toleration and deepening of character. Whether this necessary physical culture be imparted as Eurhythmics, calisthenics, drill, interpretative gesture, or folk-lore classical-dancing, it must be imparted for increased health, training in breathing, for promotion of gracefulness, for self-insulation from disease, for self-injection of affirmative thoughts and will-power, and for alignment with the fundamental cosmic rates of periodicity in the ceaseless motion and change which give stability to our pulsating existence.



SRI RAMANA MAHARSHI

THE SCHOLAR PRESS, PALGHAT

*By courtesy, The Sarvadikari,
Ramanasramam.*

Sri Ramana Maharshi*

By S. VAIDYANATHAN, B. A.

I



HIRUVANNAMALAI in the North Arcot District has long been a sacred place to the Hindus. The temple and hill of Arunachala are dear particularly to the heart of every Saivite. The Kartikai festival attracts crowds to this place. But for some years now, a new force has been drawing, not only Saivites and Hindus, but people of all religions and nationalities who have any respect for things spiritual and are earnest about it.

This new and powerful attraction is Sri Ramana Maharshi. He is about sixty years old now and has an increasing band of devotees with him. He lives in a quiet garden near Palitirtham tank, a beacon of light and solace for many a troubled soul. Unhappy and suffering people from far and near, enquiring and critical minds even from the West, come to him and see in him "the latest descendent of India's Rishis". Indeed, Maharshi is such a new force in our spiritual life and such an eloquent vindication of our spiritual integrity that a sketch of his life and teachings, however meagre and incomprehensive, will not be out of place.

At 1 a. m. on December 30, 1879, (Pramathi, Margali 16th), Mr. Sundararama Iyer, a pleader in the village of Thiruchuzhi, saw the birth of his second son. It was a sacred day—Arudra Darsanam day, the day on which Lord Nataraja appeared before his devotees, Patanjali, Vyaghrapada and Gautama Muni. Tradition has it that a member from every generation of this family turned ascetic. But this child Venkataraman gave no hint that he was the appointed person from his generation. He was just an ordinary child and nothing more. He showed high intelligence, as many another boy. He was indifferent to studies, but he managed to repeat his lessons on hearing other boys, and took as little time to forget things as he did to learn them. He was a sportive lad and very undemonstrative — undemonstrative to

*This article is based entirely on the book "Self-realisation, Life and Teachings of Ramana Maharshi" by Sri B. V. Narasimhaswami — a book written clearly and with understanding. The present writer does not claim any originality. A good Malayalam translation of Sri Narasimhaswami's book is now in the press. It has also been translated in other vernaculars.

the extent of self-suppression. As a boy, he drifted into the traditional Siya worship. But even here, he had not any especial emotion.

When Venkataraman (as the boy was called) was about sixteen years old, a relation of his happened to mention the name Arunachala and this, we are told, produced a peculiar impression in the boy's mind. This name which had no special appeal for him so long, signified much now. It evoked a sense of love for God, His mercy and omnipotence.

This was the first awakening.

But nobody knew this, so completely did the boy suppress himself. Some days later, he came upon a copy of *Periya-puranam* and going through it, felt a wave in his heart, feeling intensely the religious urge. When the book had been gone through, the feeling also seemed to subside. He had suppressed himself again.

The third experience was decisive. One day, the boy felt a sudden and inexplicable fear of death. He felt he was going to die. And the strange effect of this fear was that it made him think. It made him introspective. "What is death?", thought the lad, and he dramatised the scene of death, lying down inert and corpse-like. "This body is dead. It will be burnt away. But does it mean that I am dead? Am I just this body and nothing more?" At this, he felt all his inner being rise in revolt and shout out an emphatic "No". "No", said the boy to himself, "I am something more than the body. I am spirit transcending the body. I am Spirit Immortal." This was not a mere intellectual process, but a vivid realisation, a flash of lightning from the source of all light into the mind of this wayward boy still in his teens. No sooner had this truth dawned on the boy's mind than all his fear of death vanished. From this time, the fascination of the self has continued to this day without a break. Absorption in the self became habitual to him.

World ties began to wear away gradually. Venkataraman became indifferent to worldly things and meditation became the predominant function of life. This grew more and more powerful until one day, in the course of some school work, his agitated mind sought relief and he lost himself in *Samadhi*, sitting bolt upright, with eyes closed. His elder brother, noticing this, asked why such a person should have any studies. The remark, though familiar, struck home and the boy also felt the truth of the remark. Meanwhile, the Divine call became insistent, more and more urgent. So on the 29th of August, 1896, he left home unobserved, determined to seek his Father who, he felt, was in

Arunachala. He left a note at home mentioning his going in quest of his Father, but not his destination.

After some wandering, the boy arrived in Arunachala, to the feet of his Father. Once there, the Divine consciousness grew ever stronger. He shaved his head clean, cast away his sacred thread and clothes, and with just a *Kaupin* on him, began his meditations.

A young boy lost in *Samadhi* in the temple of Arunachala was not an ordinary sight. He sat in obscure corners and seemed not to be aware of the attack of insects which resented the unwarranted intrusion into their domain. Some people saw greatness in his eyes and respected him. Others, less penetrating but tolerant, moved away with a smile. Unthinking youth persecuted him. The religiously inclined and benevolent helped him to the extent they could. But indifference, mischief, malice, adoration—all these were the same to this strange boy. When the pelting of stones became unbearable, he moved to more remote corners; when a benevolent soul offered better security in another place, he gladly accepted it; when begged to go back home by the exasperated mother and other relations, he sent them back in despair. Thus, with various shiftings from place to place and varied reception by the world, the boy continued in his own way. The jeering, irreverent folk turned away soon abashed at this determination and absorption. The reputation of the boy gradually grew. As months multiplied into years, he began to attract crowds, which included honest seekers after truth, inquisitive minds and sceptic ones. Some of them recognised the treasure they found, and stayed with him. Thus a good number of devotees gathered round him. This, of course, gave rise to jealousy in other "Sadhus", who tried to snub the new-comer. But everything gave way before the stern life and disarming innocence and simplicity of "Brahmanaswamy". The devotees and admirers grew in number and influence. They organised the Guru's residence as he moved from cave to cave and made every other arrangement for him. They brought him books to read and got themselves illumined by his rapid study and his forceful, satisfying interpretation of them. To-day he has his own Ashram (Sri Ramanashramam) with an expert organisation and management by his own brother who, of course, is an ascetic (Swami Niranjanananda) as was his mother, when she realised the true metal of her Venkataraman.

II

To-day Sri Ramanashramam is an important place of pilgrimage. The Maharshi rules, of course, by love. There are a number

of those who call themselves disciples. His modesty, simplicity and unobtrusiveness are striking. Life in the Ashram is regulated. The Maharshi has equal regard and solicitude for every soul in the Ashram, even the dogs, cows, monkeys and other creatures being equally well cared for as the disciples and visitors, high or low. Everything received as present or offering is shared equally. The Maharshi takes his food only after satisfying himself that all others—including the animals—have had their share. He does not relish his being deified. The dignity of Labour he also recognises; he can cut vegetables or go on sewing with the same absorption he shows when he sits in meditation. He has reached that stage at which, whatever one may be doing, one is perpetually in *Samadhi*. "Keep your hands busy in society, but your head cool in solitude," he advises, and himself acts on the advice. He is surrounded by love on every side and he radiates love, peace and joy all around. His is not the way of spiritual dictation. He allows the fullest freedom to all. "He simply puts forward a way of self-analysis", says Paul Brunton, "which can be practised irrespective of any ancient or modern theories and beliefs which one may hold, a way that will finally lead man to true self-understanding." He does not lay down rules. But the aroma of the atmosphere in which he is in takes possession of the visitor's heart and sets in motion a wave of inward current, which gradually gathers strength and in the end submerges the soul in an ecstatic ocean of spiritual bliss.

Paul Brunton thus defines the gist of his message: "Pursue the inquiry 'Who am I' relentlessly. Analyse your entire personality. Try to find out where the I-thought begins. Go on with your meditations. Keep turning your attention within. One day the wheel of thought will slow down and an intuition will mysteriously arise. Follow that intuition, let your thinking stop and it will eventually lead you to the goal."

That, in a nut-shell, is Maharshi's most fundamental teaching, his method of self-analysis. "Know thyself", is his advice to every seeker. Continuous absorption in the self will gradually drive away thoughts. Man will realise that thought is merely an instrument, that the mind takes its source from a plane which transcends reason. He will then be released from the tangle of thought and stand apart from his own intellect. He will cease to think or feel: he will just be. This state is difficult to describe.*

* The best attempt has been made by Paul Brunton, whose succinct description is too long to be quoted here and has too unique a continuity to be amenable to any breaking up.

Happiness is, consequently, an attitude of the mind and does not depend on external affairs. It is possible for man to so discipline his mind as to remain satisfied and serene by himself.

Maharshi is also in agreement with the Karma Yogi's teaching that there is no conflict between work and wisdom. Only, we must remember that our right is only to work and not to the fruits thereof.

Maharshi, of course, has no communal ideas. He is above caste or creed or sex.

Man's mind, he says, is a screen. Between this screen and the divine white Light is placed the prism 'world'. This diffuses the white light into several colours so that what man sees is not the Light itself but its changed forms, not God Himself but his varied manifestations. This prism must be removed and then the true and original light will be seen.

Sin, according to the Maharshi, is man's effort to be released from a supposed bondage. Man does not know that his effort is to be released, and ignorantly thinks that his activities are for some particular, immediate end. This will be evident if he analyses his mind. When he realises this, he will begin to think of the easiest way of liberation. Now man's liberation is the knowing that he is not bound at all, that he is a free spirit. That is, to be liberated is to know the Self.

These are the fundamental tenets of Maharshi's religious interpretations of the law of life. He is largely in agreement with the mental attitude of our Rishis. One sees in him the perfection of non-violence, toleration, benevolence. And he teaches not so much by words but by his own life. Even those who are sceptical about religion or scoff at philosophy as the "search for a black horse in a dark room where it does not exist", cannot fail to be impressed by the implacable equanimity of this great soul.

This, I believe, is the significance of the Maharshi's message to us who live in this enquiring age. Religion has always been the concern of the few, the consolation of the many. To the unthinking, life's whimsicalities are just "His will". But to the thoughtful, life is a puzzle, which grows the more complex the more thought is bestowed upon it. Hence our scepticism. Maharshi applies a correction to this mistake of scepticism. We become sceptics when reason comes to a limit beyond which it cannot proceed. That is, to be sceptic is only to confess the powerlessness and inadequacy of reason in the spiritual world. We have to get rid of our assumption of the supreme power of

the thinking faculty, to realise that thought is at best a weak instrument which we can, and must, lay aside when we reach the gates of the world of Light. No more clearing work is necessary here; truth dawns upon our consciousness in flashes, from unexpected quarters, in undreamt of inexplicable ways. That is intuition, and thought has no place there. Maharshi proclaims this truth to the world by his life. The very essence of his bliss—indeed, his bliss itself—is his freedom from thought. We may not easily attain this state of freedom from thought, but those of us who know the torture of thought can well estimate the bliss of that state. The world prism is not non-existent to the Maharshi. But he knows it is a prism and has managed to move away from it. He is no longer a part of the phenomenal world, but a detached spirit who understands the drama of life and views it from a higher plane, with not a ripple in the peaceful ocean of his bliss. We may be sceptic about God, or, granting His existence, of his benevolence; we may refute, with clever logic, the tenets of any system of philosophy. Maharshi is a grim, irrefutable answer to all our intellectual gymnastics. He proclaims the eternal truth of all religion and is guarantee that man can be free if he strives.

Thunchath Ezuthachan

By M. S. KRISHNA AYYAR



ETTATHUNAD has been the birth-place of many scholars and poets. The great devotee of Lord Krishna and poet Mepathur Bhattathiri, his Guru, the scholar among scholars, Achutha Pisharoti, Vasu Bhattathiri, the writer of the commentary named Bhava-prakasika for Narayaneeyam, the erudite and well-known grammarian, Nana Pisharoti, who carried on an intellectual disquisition for many days with Uddanda Sastrigal, the famous poet and dialectician belonging to the Chola country, were all its sons and it has given us too in present times no less a person than Mahakavi Vallathol. Besides these there flourished in this place many Nambudiri Brahmans who have made their mark as dialecticians, logicians, grammarians and philosophers.

In this famous part of the Kerala country, was born the father of Malayalam language, Ezuthachan at a place called Thuchanparamba, situated near the Thrikandiyur Siva temple on the right banks of the Bharata river in Thrikandiyur Amsam of the Ponnani Taluq, a mile and a half to the south west of the present Tirur railway station. This compound (Thunchanparamba) is now a garden of tall cocoanut trees and in its midst exists a tiny tiled hut. This small building in its unrenovated form, is fancied to have been the residence of the poet and is now, out of respect and devotion, called the "Guru Mutt". Close to the Mutt, there is a small pond and a well, which seem not to have been attended to for years and so are in a sorry state of disrepair. There is little water in the well, but the people in and around say that it never goes dry and all efforts to drain off its water and repair the well had been unsuccessful. It is also believed that the Guru's *Puja vighrams* (idols of worship), *puja* articles and many such other exquisite things lie deposited in the well. The puddle gets dried up in summer. Near it there is a *Kaanjira* tree (*Nux Vomica*). Some opine that Ezuthachan used to conduct his daily Japa (meditation) at the foot of this tree and ascribe it as the reason for its leaves not being bitter to taste, and point out to the sparseness of the leaves in the tree as having been caused by the visitors plucking out the leaves and tasting them. That a lamp is lit daily at the foot of the tree is also believed to be another index of the sanctity that is supposed to be attached to it. The soil on Thunchanparamba is of a clay, pink colour and inhabitants of the locality around take clods of

earth for spreading and writing on by children when they are for the first time initiated into the instruction of the three R's. On the Vijayadasami day the neighbours start their reading at this place. At the place where now the small tiled structure stands there was some years ago only a small foundation and over it a building platform. Subsequently a thatched shed was put up at the instance of some devotees and on special days as the *Navaratri*, *pujas* were being conducted and offerings made. It is only within very recent times that the present tiled building was erected as a result of endeavours made by some lovers of literature and art. But still no endowment or other proper arrangement seem to have been made for the proper upkeep of the Mutt and its precincts. Many devotees and lovers of language and literature still visit the place and it may be hoped that under the new age of changing values instilling fresh ideas of patriotism and love of the mother-tounge, the Mutt and the surroundings will shine forth in added splendour at no distant future.

As is the case with many a world poet, Ezuthachan's date too has not as yet been fixed and most of the incidents connected with his life still remain obscure and incapable of ascertainment. Doctors Gundert and Burnell, and Mr. Logan fix his date as 775—875 M. E. (17th century of the Christian Era). Kovunni Nedungadi, the author of "Kerala Kaumudi", would say that he lived at about the Malayalam year 600 (1425 A. C.). Mr. Govinda Pillay, the author of the history of Malayalam Literature, opines that Ezuthachan lived between 700 and 800 of the Malayalam era. (1525—1625 A. C.). Until further researches put us in possession of surer facts, and build up a firmer foundation—it will be safe not to fix the date with any amount of precision.

The method of fixing the date of a poet or other writer with reference to the grammatical or other constructional differences does not hold good in the case of Ezuthachan, because there has been very little appreciable change since his time in this respect in Malayalam literary style. The other method by which the date is fixed with reference to the social and political conditions portrayed does not also afford any help as Ezuthachan has never given place in his works to things worldly, but has always roamed the realms of the highest spiritual thought and philosophy. The philological method by which a particular form or style is assigned to particular periods of the development in the language affords only slight help in fixing Ezuthachan's date within very broad limits. From the profundity of the Tamil words, the style and the metre employed, it may even at first sight be found that Niranathu Panikkars lived and wrote long before Ezuthachan. It is also easy to see that Cherusseri, the author of the "Krishna Gatha", lived before Ezuthachan. From

the progressive changes and development in style it may also be concluded that Ezuthachan must have been the product of the period immediately succeeding Cherusseri. Cherusseri's time is more or less fixed to be between 650 and 750 M. E., and the more modern Kunjan Nambyar, the author of the *Thullals*, is ascertained to have lived in the 10th century M. E., it is not therefore, improbable that Ezuthachan lived in between these two i.e. between 760 and 800 M. E.

Again, the position taken up by the author of the history of Malayalam Literature may be supported by some evidence and even here surmises have a large place and differences of opinion are too many. The date of the bringing into Kerala of the original of the *Adhyatma-Ramayana* has been fixed as Chingom 787 M. E. (August—September 1612 A. C.). Tradition has it that Ezuthachan transcribed it in Arya script and along with it also composed his *Adhyatma Ramayanam Kilippattu* at the command of the Raja of Ambalapuzha. If that is so 8th century M. E. might well be his date. It is to be noted here that even accepting the date of the bringing in of the original to Kerala and the tradition itself as true there is nothing to show as to how soon after or how much later than that date Ezuthachan took up the work of transcription or translation. Further it is also said that the *Adhyatma Ramayana* was translated at the instance of the Azuvancheri Thamburakkal and that the Ambalapuzha Raja had nothing to do with it.

There is some evidence to show that Mepathur Bhattathiri and Ezuthachan were contemporaries and great personal friends. It is computed that Bhattathiri finished his *Narayaneeyam* on the 28th Vrischigam 762 M. E. (1587 A. C.). Adopting a similar method of computation it is said that Ezuthachan's *Adhyatma Ramayana* was finished on 20th Chingom 787 (1612). This again strengthens the view that Ezuthachan lived in the 8th century M. E.

As against the above, Mr. C. S. Gopal Panikkar, a scholar of great repute opines that Ezuthachan made his gift of lands and villages to the Brahmans at Chittur on 11th Thulam 729 (27th October 1554). This, if true, would effectively knock out the bottom of what we have said hitherto with regard to Ezuthachan's date. Tradition has it, and reason also supports it, that Ezuthachan came to Chittur and made the gift to Brahmans towards the last stage of his life. If so, the span of his life after the gift could not have been very long and it renders his avowed friendship with Bhattathiri, and the date of his *Ramayana* etc. improbable. If, as is supposed by some, the Chittur village was founded not by Thunchan but by his disciple Suryanarayana, to accept the date of founding the village as given by Mr. Panikkar, would mean putting back the date of Ezuthachan by many years. If again it is to

be supposed that Chittur village was founded during the early part of his life, he must have been born somewhere near 700 M. E. and he must have been somewhere near ninety when he completed his Ramayana. Apart from its improbability, this supposition militates against the theory of the litterateurs that Ramayana was one of Ezhuthachan's early works. So all things considered, and as we have said, till more definite data comes forward, it may be advisable and convenient to accept the years between 700 and 800 as his probable date.

A good deal of controversy there is with regard to the birth and parentage of Ezuthachan. Here also positive evidence is lacking and the various accounts we are having, have only tradition for their foundation. We can at the present stage of our knowledge of Ezhuthachan only catalogue some of the traditions and discuss their pros and cons a little. One story is that a North-Malabar Nambudiri, returning from Trivandrum after the Murajapam, came to Thrikkandiyur, when owing to the lateness of the hour he retired into a *Chakkala Nayar* house and that Ezuthachan was the issue of the connection the Nambudiri had with a young woman therein. Some have it that it was not a Nambudiri, but a *Paradesha* Tamil Brahmin. There are inherent improbabilities in accepting either of the two stories. There were no such communications at that time as to enable a traveller from Trivandrum to get at such an out-of-the-way place like Thrikkandiyur and further the Murajapam function itself was first started and began to be conducted only from the time of Maharaja Martanda-Varma who admittedly lived at a time much later to that of Ezuthachan. Again why should the Nambudiri have preferred to remain with such indigent people belonging to a low order of society and looked down upon by Nambudiris and other high caste men, when he could have easily resorted to the Alatur village inhabited by many of his own affluent caste men. That a foreign Brahmin, whose habits, dress and mother-tongue too must have been entirely different, was accepted at first sight by a Nayar woman for progeny does not also stand to reason.

A story slightly different from the one detailed above is current in Vettathunad. A North Malabar Nambudiri, an astrological prodigy it is said, was on his way home from Trivandrum when one evening he came to Thrikkandiyur, had his dinner at the choultry there, and retired for the night at the *illom* (house) of one Thattaramparambath Moosad. The Nambudiri had known that he was that day destined to have a son of extraordinary merit and was sorry that he could not get to his home. He was restless that the auspicious time as calculated from the position of the stars was being lost and so was repeatedly getting out of

bed and looking at the sky and returning to bed every now and then. There was in that *illom* a servant woman belonging to the Chakkala Nayar House called Thunchath, who, enquiring after the reason for the Nambudiri's restlessness, prayed that she should be given the privilege of bearing such a son. As led on by the wings of destiny the Nambudiri consented and Ezuthachan was born as a result of that Gandharva union. This story has, indeed, a greater romantic touch about it, but is not more convincing than the other two in its probabilities.

Ezuthachan mentions in his *Harinamakirtana* of one Nilakanta. This Nilakanta, whose full name is Nilakanta Somayaji, is said to be his father. Except bald statements there is not much evidence for this either.

What Ezuthachan's name was, has also been a matter for much speculation. The usual appellation "Ramanujan" is only indicative of the fact that he was the younger brother of one Rama. Again Ramanujan is said to be a surname he took for himself out of respect to one Ramanujacharya under whose feet he sat during the time he spent in other parts of the country. Sankaran and Suryanarayanan are the other names ascribed to him.

Next to nothing is known of Ezuthachan's boyhood. There is, however, an interesting anecdote handed down to us by tradition. He seems to have been taken very often for worship to the Tirunavaya and Thrikkandiyur temples. One day the Nambudiris were chanting the Vedas in the Tirunavaya temple. The boy hearing the chant blurted out *Kadu! Kadu!* (probably meaning dirt! dirt!). The boy's mother did not understand what the child meant. But the Nambudiris could guess that the boy was referring to the mistakes in their chant. They, getting jealous of the boy's powers, made him dull and dumb by giving to him plantains and fried rice with certain incantations. When after sometime the boy's father Nambudiri came to Thrikkandiyur he found out the secret of the boy's failings and in order to counteract the effect of the incantations suggested that the boy be given some liquor. The administration of this antidote is believed to have helped the boy in regaining his intellectual powers. What was first begun to be taken in the form of medicine is believed by many to have become his life-long habit. That Ezuthachan was habituated to drink might be a story invented by fertile imagination, or it may be that it is attributed to him because man always revels in denying perfection to another, or it may also be that as among many great men one or other of some serious failing is met with, Ezuthachan was also addicted to this vice.

It is surmised that Ezuthachan had his early training under his own father Nilakanta, that his elder brother also took some care about his studies, that because he was well versed in Sahitya, Vedanta, Yoga Sastra etc, must have been under more than one teacher and that perhaps out of so many, Ramanujacharya was the leading one.

That Ezuthachan returned to his own place after his travels when he was some way between twenty and thirty and started a pial school is the story told by traditionalists. He must have gained large acquaintance with the Tamil and Telugu literatures during his travels. It must have been this touch that helped him in bringing into vogue the new Kilippattu.

Many a story is current that the jealous Nambudiris wanting to make fun of him, tried many a game. Referring to his low caste position of Chakkala Nair (Oilmonger caste) the Nambudiris once asked him "how much could be ground in your Chekku (Country oil mill)". The poet answered:— "In my humble self's chekku "four" and "six" could be ground," indicating thereby that he knew the four Vedas and the six Sastras. At another time the Nambudiris wrote out a big volume containing a parody of one of his famous and beautiful lines in the Mahabharatha and took it to him for his opinion. It is not impossible that he had these little pin-pricks at a time when a study of the Vedas etc. was held to be the monopoly of the Brahman and that others had no *Adhikara* (right or privilege) for it. But even among the Nambudiri Brahmans there were some who recognised Ezuthachan's learning and piety and no less a person, as indicated above, than Meppathur Bhattathiri was one such. It must also be mentioned that Ezuthachan himself had unbounded devotion towards the Brahmin, and any number of passages could be cited wherein he goes into raptures over the Brahmans versed in the Vedas. An amusing story is told that Bhattathiri, unable to get any cure for his rheumatic complaints, sent a messenger to Ezuthachan seeking his advice in the matter. Ezuthachan sent word:— "Ask Bhattathiri to begin tasting fish" (*Matsyam thottu koottuvaan parayuga*). The intelligent Bhattathiri perceived instantly what was meant and began composing his famous poem *Narayaneeyam* beginning with the *Matsyavatara* (the first or the fish form incarnation of Vishnu).

It is said that Ezuthachan passed his last days at Chittur (Cochin). Amidst his travels he once came to the place and was so attracted by its natural beauty that he decided to spend his last days there. When he came there the site on which the present Guru Mutt and village stand was all a sheet of forests. He purchased that site for 4000 fanams from Chambathil Mannadiar, cleared the forest and built on it a Sri Rama temple. Twelve

India and the Gloomy Dean

By DEWAN BAHADUR K. S. RAMASWAMI SASTRI.

I

I am setting down here a few thoughts about and from Dean Inge not only because they are interesting in themselves but also because they have a kinship with the genius and spirit of India and show a way to the world out of the entanglements of to-day.

So far as the personal life of each individual is concerned, we must do what we are not doing to a large extent to-day—keep up our passion for new thought. The Dean says: "I confess that books are for me the most indispensable of all the pleasures of life." But we must not read for the sake of reading. "Reading, says Bacon, makes a full man; but if we fill ourselves too full, we shall suffer from chronic mental dyspepsia The real danger of perpetual reading is that it becomes a mere habit, a method of self-indulgence". Many persons take to a reading of novels as an anodyne, as a means of flying away from their dull, drab lives. But we ought to study what will enlarge our professional interests and enable us to take a living interest in the larger affairs of the nation. During boyhood, the hobby of each boy should be cultivated. "We must allow our sons to follow the gleam". He says further: "The main object of secondary education is to turn out boys who shall represent the national ideal of character on its best side. I am strongly in favour of building a boy's religion on this national tradition, which is a very fine one, and has the advantage of being indigenous, not exotic". Are we Indians acting on this wholesome truth to-day? Thus both as boys and men we have to set many things right.

Everywhere spoonfeeding is on the increase. Already the art of cooking has made man a toothless animal. The typewriter has killed handwriting. The bus has killed walking and riding. The newspapers and cinemas have stolen our eyes. The hill railway has supplanted mountaineering. The Dean says: "Everywhere we find the same demand to make life easy, safe, and fool-proof..... We now demand to be personally conducted through life, all risks to be taken by some one else. After a century or two of this regime, we shall be as helpless as Lord Avebury's ants, who starved almost to death in sight of food because they were used to having it put into their mouths by their slaves."

II

Are we any better in our social and economic life? Politically it may be that everyone wants for one and no one for more than one. Even there that is only a theory and nothing more. But in the realm of economics how do we stand? The appalling inequalities of wealth which we find in the West have come to be in India also. Jesus had some unpleasant words to say about rich men and camels but who heeds him? Livelihood is accounted of more value than life. Everyone wants the numerator to go up and the denominator to go down. At the same time the rich indulge in all sorts of useless and poisonous luxuries and waste money while regretting that the necessities of life have enormously increased and deplete their purses which they are filling fast at the expense of the already poor. The State, in its turn, is butting in and talks of surtaxes and supertaxes and death duties and cesses and rates and so on, putting its hand deep into the purses of the selfish rich. It does not spend the taxes on nation building but on armaments. The Dean says well: "To buy things which do us no good and give us no pleasure is stupid but most English people do it constantly." "The State already draws a distinction between earned and unearned income, and regards the latter as fair game for predatory raids. Personally, I am ready to maintain that every shilling of my savings, such as they are, has been honestly, thoroughly and laboriously earned, and I deny the right of the State to rob me of it for the benefit of persons who are not earning anything. But as long as we have universal suffrage each General Election will be a kind of auction of the worldly goods of the minority". "In my opinion, nothing can save this country except ten years of drastic economy, public and private, and hard work. There is not the slightest hope, so far as I can see, from any of the three political parties. We are all idling, gambling, and spending—rushing towards the precipice like the Gadarene swine". Are not all these things true of India to-day?

The Dean points out also how consumptionism is rampant to-day. America went dry not because it hated alcohol but because "it diminishes output". "The more drink men have the less things they need, and the less money they have to buy them." The Dean says: "We are really brought back to two rival philosophies of life..... We have to balance our account with our environment, and the sum may be represented as a vulgar fraction, the numerator being what we have, and the denominator being what we want. We may bring them together either by increasing our numerator, which is, the wisdom of the West, or by diminishing our denominator, which is the wisdom of the East.

Which is the right method of solving the problem?" He points out that big business is sure to be as hostile to art and science and philosophy and religion as to drink, because these, like drink, make men desire fewer things. "We are not really wiser or better or happier by complicating our lives by using mechanical inventions to turn luxuries into comforts, and comforts into necessities.....We are recklessly using up the natural resources of the planet, as well as defacing its beauty beyond repair". Is not India becoming a slave to consumptionism to-day? The Dean says: "The East, to sum up, has much to teach the West in these matters, and, perhaps, we may be willing to learn, now that the West is uneasily conscious that the civilisation of the East may menace our own, and perhaps outlast it. The Indian and Chinese peasant, with his frugal wants, based on immemorial tradition, may have a greater survival value than the American artisan, with his £ 1000 a year, his Ford car, his be-jewelled wife, and his daily visit to the movies." Is this true to-day? Let us pause and ponder.

III

Socially also we are getting into the grip of modernity. Any one can easily see that over-population is an evil for the humans now alive and our successors. But is birth-control the remedy? Is not the remedy worse than the disease? The inevitable corruption of morals and increase of sexual passion counterbalance the hardships of over-population. Further, the gospel of birth-control will be heeded only by the best breeds, while the lower sections of the population will breed all the faster. The nation will thus die at the top. The Dean says: "This dysgenic birth-rate, encouraged, of course, by taxation, gives serious concern to all students of eugenics". Some countries with increasing birth-rate are immoral enough to solve their population problem by conquering other countries and expropriating other peoples. The Dean points out: "Merely to subjugate another nation is worse than useless, because the conquered people, being driven to a lower standard of living, will probably multiply faster than their conquerors". "The supposed duty of multiplication and the alleged right to expand are among the chief causes of modern war, and I repeat that if they justify war, it must be a war of extermination, since mere conquest does nothing to solve the problem." He points out that "the expansion of England, over which Sir John Seeley gloated so eloquently, was a grand thing while it lasted, except for the barbarians whose lands we took from them, but it has reached its natural and inevitable limit." Nature keeps up a balance between birth-rate and death-rate, and when the

death-rate is lessened by science, the birth-rate also goes down. If it does not, the noble virtue of continence must be adopted rather than the ignoble vice of birth-control.

Another Western vice, which is invading India, is betting which is only a form of gambling and nothing more. Disraeli called betting and gambling "a vast engine of national demoralisation". Gambling is found not only on the race course but also on the Stock Exchange and elsewhere. It is irrational as an amusement and ruinous as a habit.

On the subject of divorce, the Dean has a few unpopular opinions, which may be pondered over by India. He says: "There is nothing that poisons the life of a country more surely than anything, which threatens the security, the confidence, and the purity of home life." He objects to the guilty pair being allowed by law to marry. "The permission given by the law for the guilty pair to marry each other has caused the break-up of very many happy homes.....Whatever other concessions are made, marriages of this kind ought to be absolutely forbidden." Divorce is not an impending menace in India like birth-control and betting, but it is looming on the horizon. Already a bill legalising divorce among the Hindus has been proposed to be introduced into the Central Legislature.

IV

In respect of politics—both national and international—the Dean has given us very wise counsel. He says that "the mischief of war, from the racial point of view, is that it selects the best for destruction." War disorganises also the economic fabric. He refers also to "another possible cause of decay—loss of heart and of the will to live, as the result of foreign conquest." The great world war of 1914–1918 not merely led to direct deaths in battles but let loose epidemics—typhoid and influenza and cholera—all over the world. The Dean rightly asks: "Is the world to be a second time resolved into a mutual suicide club, or will wiser counsels prevail?"

While warning us against wars, he tells us valuable home truths about democracy. Democracy is "a form of policy under which all adult citizens have votes, and in which the government is directly determined or controlled by the votes of the majority". Democracy is not only a form of Government but is also a form of Society. As a form of State, it implies ultimate popular sovereignty. As a form of Society it rests on the idea of social equality. Of course, the idea that all men are equal is, as Carlyle said, "a palpable incredibility and a delirious absurdity". But equality

before the law and equality of opportunity and equal consideration are vital to Democracy. J. S. Mill says: "The ideally best form of government is that in which the sovereignty or the supreme controlling power is vested in the entire aggregate of the community, because it promotes a higher form of national character than any other." The defects of Democracy are inefficiency, wastefulness, corruption, rule by catchwords, vexatious and inquisitive tyranny, weakness of the executive etc. The Dean says that "there are signs that it is nearly played out". But the alternatives to it are not better. He says: "My own preference is for the mixed type, such as the constitution of Great Britain in the nineteenth century".

V

The finest things in man are art and religion. The aesthetic faculty is one of the three great powers "which deliver mankind from the tyrannies of sense and of selfishness." The other two are the pure love of knowledge and the ideal of moral goodness. Hegel has said well: "The Divine is the centre of all the representations of art; great poetry may be likened to a statue, whose pedestal is upon the dark earth, but her face, emerging from the shadows into a loftier air, is turned towards that divine centre, and reflects the glory of God."

In regard to religion he says that "the centre of gravity in religion has shifted from authority and tradition to experience". He says further: "The evidences of religion are no longer external and miraculous; they are those which faith itself supplies." Religion means not only absolute dependence but also absolute union. "The mystical experience seems to those who have it to transport them out of time and place and separate individuality." "The true mystic cares little about symbolism, and often dislikes it. His inner world is so rich in forms, sounds, and colours that he objects to having poor imitations of the sublime thrust upon his senses while he is communing with the Eternal." The highest Indian thought expresses itself to the same effect, and whatever India may give up or get from the West, she must preserve her great religious ideas and intuitions while borrowing Science freely from the West.

Sri Aurobindo and Modern English Poetry*

By ANILBARAN ROY

66



IX Poems of Sri Aurobindo" marks a distinctly new step in the evolution of modern poetry. In poetry, as in all departments of life, all sorts of experiments are going on to-day, and old order is giving place to new. Young poets all over the world feel impelled to use a new language and a new technique as a vehicle for new ideas. But the forms that have emerged so far show a tendency towards chaos rather than new creation. In modern English poetry, rhyme is being freely dispensed with, and there are many who even dispense with rhythm, which is the essence of all pattern-making in poetry. And the language they use has led people to say, "These new verse-writers have turned poetry into a cross between the noise of an underground railway and the Tower of Babel." Here is rather an extreme example,

It's a jazz affair, drum crashes and cornet razes.
The trombone pony neighs and the tuba jackass snorts.
The banjo tickles and titters too awful.
The chippies talk about the funnies in the papers

The cartoonists weep in their beer
Ship riveters talk with their feet
To the feet of floozies under the tables.

A quarter of white hopes mourn with interspersed snickers:

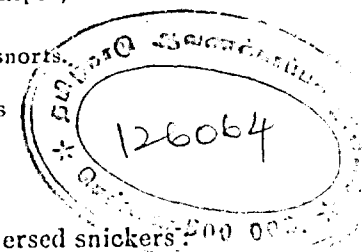
I got the blues.
I got the blues.
I got the blues.

And, as we said earlier :

The cartoonists weep in their beer.

The excuse of these young poets is that they want to write about the actual events of living in the speech that the people use in the streets. "Revolutionary ideas," says Mr. Day Lewis, (author of 'Time to Dance' etc.) "shake up our minds like an earthquake and they alter the contour of the language". Stars and nightingales and roses have become hackneyed, so the young poets write about Pylons and factories, railways, airplanes and disputed frontiers. "We write about new life," says an American poet, "We feel that new life will come from the working classes:

* (Six Poems of Sri Aurobindo. With translations in Bengali. Published by Rameswar and Co., Chandernagore. Price Rs. 1-4-0)



inevitably we write about them." A poet has certainly to write in a language which people understand about things which they understand. Still poetry is not the language which people use in the streets. It is the work of the poet to find the hidden power and beauty of the spoken language and use it to express not merely the superficial life of the people but to reveal the deep underlying forces which actually shape that life. In an age of science and machinery, it is natural for poets to write about them, and a true original poet will always be able to make poetry as much out of a sunset as out of a steam-engine. Thus Stephen Spender's lines on *The Express* are genuine poetry :

But gliding like a queen she leaves the station.
Without bowing and with restrained unconcern
She passes the houses which humbly crowd outside,
The gasworks, and at last the heavy page
Of Death, printed by gravestones in the cemetery.

But poetry of the highest order is made only when the outward things are used as symbols to give expression to the deepest truths of life. Steam-engines, airplanes and skyscrapers are symbols of the mastery of man over external nature; but there is a greater victory waiting for him; the victory over his inner nature, over greed and passion, ignorance and falsehood which makes life full of misery in spite of all the conquests of science and machinery, and the Five year Plans and New Deals. Sri Aurobindo's poetry is an expression of the deepest spiritual experiences which alone can give the true meaning to human life and lead it to its fulfilment. Man is on the point of making a great victory, of taking the next higher step in his evolution and Sri Aurobindo stands as the seer-poet of that victorious march of mankind to its destiny of a spiritual divine life on the earth.

As regards the forms of poetry, if the old metrical forms are no longer adequate, new ones have to be evolved. In fact every age has its contribution in new patterns and new rhythms in poetry. But the way is not to dispense with poetical rhythm altogether as the writers of free verse are trying to do. Poetry without rhythm is a contradiction in terms. Rhyme is in a different category, since it is not essential to poetry; but only those can afford to dispense with it, who can give their rhythm that additional strength which is needed to hold unrhymed verse together, strength obtained by close-packed thought and a careful choice of words and, above all, by harmonious variations in the rhythm. In *Horis Aeternum* Sri Aurobindo aims at finding a halfway house between free verse and regular metrical poetry :

A far sail on the unchangeable monotone of a slow slumbering sea,
A world of power hushed into symbols of hue, silent unendingly ;

"It is an attempt" as he himself says, "to avoid the chaotic amorphousness of free verse and keep to a regular form based on the fixed number of stresses in each line and part of a line while yet there shall be a great plasticity and variety in all the other elements of poetic rhythm, the number of syllables, the management of the feet, if any, the distribution of the stress-beats, the changing modulation of the rhythm." The author calls it a very simple and elementary model which he developed further in *The Bird of Fire*, where the stanza is of four lines, alternately of twelve and ten stresses. Here are two typical lines :

Rich and red is thy breast, O bird, like blood of soul climbing
the hard crag-teeth world, wounded and nude,
A ruby of flame-petalled love in the silver-gold alter-vase
of moon-edged night and rising day.

There are two other metrical experiments in the volume. In *Trance* Sri Aurobindo has found an altogether new rhythm in English poetry using the old classical quantitative foot measures. It is a four-line stanza; in the first line two amphibrachs are followed by a cretic, in the second line the first foot is a cretic, the second an amphibrach and the last an anapaest. Here is one stanza :

My mind is awake in stirless trance,
Hushed my heart a burden of delight ;
Dispelled is the senses' flicker-dance,
Mute the body aureate with light.

This metre is suited only for a brief lyrical poem. So in *Shiva* and *The Life Heavens* he has introduced an ample number of modulations which allow a fairly free variation of the rhythm without destroying the consistence of the underlying rhythmic measure. In *Jivanmukta* Sri Aurobindo has shown the possibilities of Alcaics in English poetry. The subject is the Vedantic ideals of the living liberated man :

He acts and lives. Vain things are mind's smaller motives
To one whose soul enjoys for its high possession
Infinity and the sempiternal
All is his guide and beloved and refuge.

This is perhaps for the first time in English poetry that Alcaics have been used with such success.

The methods employed by Sri Aurobindo do not "tend to make poetry a kind of culture artificially fostered in a laboratory". His poems come from the very depths of Reality and constitute the essence of poetry. Though he expresses spiritual experiences, he does not merely philosophise in verse. It is not at all easy to write poetry which will be a transcript of a spiritual condition. "If one writes only ideas about what it is or should be, there is a

failure. There must be something concrete, the form, the essential spiritual emotion of the state. The words chosen must be the right words in their proper place and each part of the statement in its place in an inevitable whole. Verbiage, flourishes there must be none." As a matter of fact, spiritual poetry succeeded nowhere except in the great Upanishads and in some passages of the Gita. Thus the Upanishad speaks of the Eternal Reality which it calls the Brahman:

The eternal is hidden in a glorious golden sheath, the indivisible and stainless Spirit, and he is a brightness and the light of all lights and the One that self-knowers know.

There the sun shines not and the moon has no splendour and the stars are blind; there these lightnings flash not, nor any earthly fire. For all that is bright is but the shadow of His brightness and by His shining all this shineth.

All is this eternal and immortal Brahman. The Eternal is before us and the Eternal is behind us and to the south and to the north of us and above and below and extended everywhere. All this magnificent universe is nothing but the Eternal.

— *Mundaka Upanishad*’, translated by Sri Aurobindo.

The Upanishads speak of the Brahman in various ways, but their tendency is to take one away from life so that he may live in the immortal ecstasy of the Brahman consciousness. But Sri Aurobindo’s ideal is the attainment of the Brahman consciousness as a means of conquering the evils in the world and the realisation of a divine life on this earth and in this material body. In *The Life Heavens*, Earth thus cries to the limitless Sublime:

I, Earth, have a deeper power than Heaven;
My lonely sorrow surpasses its rose-joys,
A red and bitter seed of the raptures seven;
My dumbness fills with echoes of a far Voice.
By me the last finite, yearning, strives
To reach the last infinity’s unknown,
The Eternal is broken into fleeting lives
And Godhead pent in the mire and stone.

The poetical translations of the Six Poems into Bengali show that the Bengali language is rapidly developing the capacity to be a fit vehicle of the new poetry, the poetry of the new spiritual age which is to emerge out of the modern chaos.



MISS SHANTHA APTE

Siren of the Indian Screen

Shantha Apte Wants to Quit Films.

By FILM FAN



THE moment I saw Miss Shantha Apte, I was captivated by her personality. When I called on her during her fleeting visit to Madras, I was told she was resting and was asked to wait. And suddenly, without warning, in floated a vision of loveliness, which took my breath away.

Evidently she diagnosed the symptoms and at once proceeded to put me at my ease. We sat and talked about her future for a whole pleasant hour. She only knows a smattering of English but that did not matter.

Miss Apte has a captivating charm, youthful vivacity, an impish sense of humour and a smile that lights up the whole place.

She is one of the most stimulating talkers I have ever met and her ruling passion is music.

"My present contract with Prabhat expires in 1940," she told me. "Then I am going to devote all my time to music."

She wants to be a great concert artiste because the medium of the screen does not offer her full scope for the development of her musical genius.

"In the films, you see," she confided, "the Director is the thing. You just do what he says. That is rather irksome." And like a caged canary waiting for the bars of its prison to open, she is looking forward to 1940, when she will be a free agent once again. And then music, classical music.

Miss Shantha Apte stumbled into films, as it were. She was born in Dudhni in Hyderabad State, barely 18 summers ago, the last of the seventeen children of a railway station master. The old gentleman died when his youngest daughter was only four and the burden of supporting the family fell on the shoulders of Mr. Baburao Apte, the eldest son, who himself was not in very affluent circumstances.

Mr. Baburao was quick to notice the talents of his kid-sister and at once proceeded to provide her with good musical training.

And the result is that to-day the little girl of yesterday has been universally acclaimed as the siren of the Indian screen. Where singing alone is concerned, she is second to no other actress in the land.

And this has not been achieved overnight. There has been over ten years of gruelling work behind it. She began to study music in 1928 and is now being trained by Mr. Narayana Thite, Principal of the Maharashtra Sangeeth Vidyalaya, Bandarpur. In fact, she has two tutors, one for ragas and the other for talas.

And if the dance tutor is taken into account, it makes three.

Fourteen hours' work a day, that is her routine now. And with all that she looks as fresh as a new-blown lily. She spares no effort to see that she keeps fit.

The cinema is merely a by-product of her great ebullient energy. She has not just been ricocheted to fame through the side door, but has fought every inch of her way up.

Miss Apte drifted to films, because it opened up to her the way to riches, with which she could give herself a first class music training. The film was merely a means to an end. And her early vision has almost materialised.

Miss Apte made her screen debut in 1930 and from that day has never looked back. But it was not until she joined Prabhat and came under the able tutelage of Director Shantharam that fame courted her.

Her work in "Amar Jyoti", "Unexpected" and "Gopal-krishna" has won the highest praise.

And now she wants to quit the cinema. It is a pity. Let us hope she will make at least occasional appearances on the screen.

"There can be no doubt that Indian films have made great progress", Miss Apte observed, talking about the Indian industry, "but there is still ample room for improvement. The artistes ought to be encouraged so that their standards might continue to improve."

She then made some useful suggestions for producers. Not the least part of an artiste's job is to maintain a good physique, but there is a deplorable lack of facilities for physical culture in studios. "Producers ought to realise that it forms part of their duty to provide means for physical culture and maintain libraries on the various arts," said Miss Apte. "The film companies in India do not even make available to the artistes magazines, reviews and newspapers which comment on their artistic achievements."

Miss Apte is perfectly right and it is in the producers' interest to see that this sorry state of affairs is ended.

Though music is the prime devotion of her life, Miss Apte is also intensely interested in dancing. Her visit to South India

was mainly to get on speaking terms with our music and dancing. But it is unfortunate that during my interview with her she did not show true appreciation of our great arts. This was probably because during such a hurried visit, she has not had occasion either to study the intricacies of our music, especially the varieties of "thalas" we have and the peculiar "swara" manipulations that our artistes display or to watch our foremost exponents of the arts in action.

After her present contract expires, Miss Apte plans to take a brief trip to Europe. She is sure she can learn western singing and dancing easily.

"Any one who knows Indian music can sing western songs," she told me. And I don't doubt it, especially after I heard her rendering of an English song in "Unexpected". Her singing was as good as any prima donna's.

Some time ago Miss Apte pleaded for an international screen understanding, by which Indian and Western artistes would work together in the same film. This is a consummation devoutly to be wished. Sabu has already blazed the trail and who knows we may not see Miss Shantha Apte one day starring in a western film in the near future?

Miss Shantha Apte has reached an interesting stage of her career. She has a full life and she loves it. Nothing gives her more pleasure than hard work. Let us wish her luck in her future.

The Moral Equivalent of War

An Opportunity for Small or Weak Nations

By AGHORAM AIYER



SMALL or weak nationalities are in peril of breaking down from the pressure of strong nations on them. That is the lesson to be drawn from the fate which overtook Czecho-slovakia, about a month ago. The balance of power which sustained small nationalities in Europe in the nineteenth century is no longer the force that holds. A new form of that balance of power is now gaining ground which seems to require the destruction of small or weak nationalities. Within one year, a weak nation like Austria and a small nation like Czecho-slovakia have gone down before Germany, without the latter shedding a drop of blood. These are two of the great personal triumphs of Herr Hitler, and in them he has the hallmark of distinction as the leader of the German people. The threat of war has been more effective in these cases than war itself.

The danger of war has, for the moment, been averted by the labours of the leading men of the four powerful nations that sat in conference at Munich. But those two who stood forth for a while as the protector of Czecho-slovakia let her down easily, and made for a peace which sacrificed the vital interests of the small nation, and cut her living soul to pieces. The big nations arbitrated for a peace in which they had to lose nothing, one of them gained all, and the small nation on which the peace was forced lost all. It was a heartless, unrighteous peace. For the moment, the weak has gone before the strong; and the strong seem to hold together by a bond of mutual mistrust.

The one hope of the small nations is that the strong nations are not likely to hold together long. That has been so before, and that will be so in future. Is a weak or small nation to go under, in the face of a formidable combination like the one which put an end to Czecho-slovakia? If it cannot defend its freedom from the tyrant's onslaughts by modern methods of warfare, has it simply to surrender, accepting the inevitable? Can she not make new History of her own by standing up for freedom, by an organised peaceful resistance to the march of the aggressor, preferring death of the body to dishonour of the mind and the soul? If the

aggressor has to march over the prostrate bodies of his victims which hold within them their unbent and unconquered souls, will not outraged humanity in other people and even in the people of the aggressor's land rise in revolt, and free the victim, and make for the possibility of nations living at peace with one another without the strong preying on the weak? This is the weapon that Gandhiji presented to Czecho-slovakia in the hour of her defeat.

This moral equivalent of war is likely to be more and more employed by small and weak nations in their struggle against the ambition of strong nations to overwhelm them. It is difficult to say that it will immediately take the place of war. The strong nations are not likely to abjure war so soon. For their defence, and more for their offence, they will hold themselves in readiness for war. The war-readiness of small or weak nations will not avail them for a struggle with a strong nation or with a combination of strong nations. But if the weak nation is able effectively to employ the weapon of organised non-violence, it will enter on a grand phase of its struggle with the strong, it should be able to hold out a great deal longer in the struggle, even though at the first onslaught its people will die bravely in thousands and tens of thousands. The world is not likely to look idly on at this struggle, but the conscience of the people who look on will be rudely awakened, help and protection will most likely flow forth to the weak, and an honourable ending of the struggle is very possible. The organising of non-violent resistance, in such cases, calls for a technique of efficiency, different in order from that called for in a violent struggle, but nevertheless calls for a high order of efficiency.

The passion for freedom is strongly implanted by nature in the breast of man; and nations have the same love of freedom. The nation aspiring for freedom has a truer and nobler cause than the nation trying to thwart it. This aspiration for freedom would call forth, in the hour of need, the greatest bravery of the spirit, the greatest sacrifice. The lesson of a disciplined non-violent struggle is apt to grow into reality with small or weak nations whose honourable existence is now imperilled by strong nations. A brave soldier prepared to die for the freedom of his country, can by a change in the angle of vision at a psychological moment, become a disciplined non-violent soldier, dying for the freedom of his country.

It cannot be denied that the strong nations are getting ultra-strong with their preparation for modern warfare, and that though a war in the present time will involve them in heavy losses, they will not shrink from it, if the gains or spoils that

attract them to it are greater. A weak nation on which a strong nation has designs is helpless, whether it tries to be friendly with it or to enter into a struggle with it. In either case, it has the worst of it; and no strong nation is so good, that it will stand forth as the Knight-templar of the freedom of small nations.

In the crisis that threatens to overtake small or weak nations, no one of them is safe. Even if all of them combine against the strong nations, and try to match them in modern warfare, it is difficult to predict the results in favour of the small nations. Nor is a complete combination amongst the small nations easily possible or at all possible. A nation that is going to enter on a disciplined non-violent struggle has not to wait for a combination with another nation. If it has disciplined to the standard of that struggle, it can at any time, enter on it, and has nothing to fear from its being alone in the struggle. If the peaceful character, and the moral strength that should be behind the struggle, are truly maintained at every stage of it, it will gather world-opinion on its side, and at some stage, an honourable settlement should be possible. If the tyrant has not in the least relented, and in the struggle the whole nation has died, there is nothing more to say on it. For the moment wickedness has triumphed, and a brave, innocent people have perished. But the lesson of it will fire the whole world with zeal, and will do more to accomplish the abandonment of war than anything else in the past; and the nation that has died in the first great non-violent struggle will be gratefully remembered as martyrs to the cause of true peace, and as pioneers of the greatest movement for ending war.

The Psychology of Unemployment

By M. S. SRINIVASA SARMA, M. A.,

National College, Trichinopoly.



THE most anxious of our social problems today is what to do with the unemployed educated young men. It is heart-rending to see many young men, who have fought their way successfully up the educational ladder and gained high degrees and distinctions under none too pleasant conditions, stand helpless, their purpose in life suddenly cut off, writhing from the agony of unfulfilled ambitions and crushed hopes. Unemployment is a symptom of a social disease. Instead of bothering ourselves with economic laws, statistical data, trade cycle, unemployment insurance, emigration, relief measures etc., which only touch the periphery of the problem and do not go to the central root of the matter, let us enquire what "unemployment" actually is. The etymological meaning of the word "employ" affords a key to the solution of the problem. Any dictionary will tell you that "employ" means "to fold in". Unemployment, therefore, implies that certain members of the community are excluded from the fold. That is to say, they are deprived of their birthright of being educated into a state of true "humanness" through providing themselves with the necessities of life. It is, therefore, plain that those who are not self-dependent for the means of their livelihood—whatever be their station in life—are in the human sense unemployed. No person can be socially efficient if he cannot even earn a livelihood. In fact, as psychologists point out, there is danger to his sanity if he is denied opportunities to express himself in some work. A workless intelligentsia compelled to stand idle is a great danger to society. You cannot have a happy society unless the individuals are happy in their work.

Is the world perfect to-day? Have all diseases, crimes, injustices, stupidities and other evils been wiped out? Has the world become the best of all possible worlds? Is there no further work for man? Is it not a tragedy, therefore, that when there is so much to be done, our young men should be compelled to sit idle helplessly? Carlyle was struck with this paradox in unemployment most painfully. To him the spectacle was preposterous. Abundance of work waiting to be done, an army of workers clamouring to do it, but smitten helpless, able only to stand and gaze at it "petrified, as it were enchanted".

In our country, the existing system of education was moulded at its very inception with the object of training boys for clerical

vocations, and has been determined largely by the administrative needs of the Government. This system worked well as the number of Government jobs and the number of educated men were equal. The trouble began when the products of our universities grew out of all proportion to the needs of the administration.

There is no use in trying to cure this symptom of social sore by palliatives like unemployment dole, technological courses, industrialisation, foreign trade etc. (that deal only with surface causes) which are as futile as trying to rid a person of tuberculosis by merely prescribing a cough remedy. To abolish unemployment, we must consider the true motive behind the economic system; and this involves a fresh approach and an untried technique for dealing with its difficulties.

Modern psychology emphasises the power and strength of emotions in human beings. All mental maladies are evidences of emotional unbalance in the individuals; in the same way unemployment, strikes and economic depressions are symptoms of psychological agencies. To cure this economic sore, a radical change of outlook on the economic life is necessary. Economic life must be regarded as a means to man's fulfilment; the old pernicious doctrine that "economics is the chief end of man" should be abandoned; and we must realise that man is the chief end of economics. This entails a psychological interpretation of man's nature, his purposes, his destiny and his values. To "civilise" is to enlighten, to refine. Material progress does not in itself constitute civilisation. In so far as it aids spiritual, intellectual and emotional refinement, and the realisation of a life more fully satisfactory to human instincts, it is a gain to rejoice in.

We must, therefore, give up entirely the erroneous way of looking at the problems of industry and finance too objectively, ignoring completely the human factor. In the last analysis, it is not money but work that is wanted. The individual busy at work is safe; that way sanity, health and happiness lie. Action itself—no matter of what kind—constitutes the solution for most of the problems of the inner man. Let us, therefore, ask the gods not for possessions, but for things to do. "In the sweat of thy face shalt thou eat bread"—sums up the law and the prophets. "The Kingdom of Heaven is within you"—this is the philosophy of happiness in a nutshell. The way of achieving balance and peace is not by acquiring new things, but by acquiring a new attitude towards things.

We are out of work in the sense of not being harmonised or "whole" individuals; we do not *understand* the factors that constitute us—body, soul, mind, spirit—to say nothing of how

to *manage* them; and on that account we are unable to carry out the purpose of life, the very *raison d'être* for being in the world, for industry and trade—which is to *create*. Here in the term "create" is the key to the solution. Man has a need for creative expression—for release of his innate power to re-create himself into a higher type of being that far outweighs and transcends his need for food, clothing and shelter. Is not God preeminently the Creator? And did He not create man in His own image? The joy, the thrill and the adventure in all economic endeavour is really, not the possession of things, but the creating of things, because that is how we re-create ourselves. When we have grasped this new concept of man's psychological make-up, there would be no room for greed in the employers and strikes and unemployment in the employees.

To fight with problems and difficulties is one of the instinctive cravings of man. His primal nature is to manipulate, to experiment, to be a cause, to construct, to create; and when there is no scope for this creative urge, he takes to drink and drugs and debauchery in his attempt to restore the lost elements of emotional experience, which are an essential part of a normal life. Munsterberg speaks the truth when he says that "Zealotism in religion, tyranny and cruelty, sexual overindulgence and perversions, gambling and betting, and above all, senseless crimes and strifes have always been the psychological means of overcoming the emptiness and monotony of an uncreative, unstimulating life."

Thus there is no use in eating our hearts out because we cannot be ministers of millionaires; there is no use trying to be like somebody else when our primary task is to find out our real self, and learn how best to express this individuality in work. What we have each of us to realise is the scope of our own capacity, and aim at its utilisation in the fullest measure. A truly employed person is one who can concentrate all his powers upon work for the sake of work. When this takes place, it makes no difference what kind of work one undertakes, whether digging of ditch or growing of paddy; nor does what others do disturb one's equilibrium so long as the work utilises all the available creative capacity. The happiness and well-being of the race depends ultimately on work well done and the ethical satisfaction produced by honest labour, and on the conviction that good work whether in tilling the soil or in making a pot is of itself an ethical act.

Education should make man complete, and develop every creative power in him. The greatest impediment to educational progress and reform is the almost universal notion that it has to do only with the cognitive side of life. This erroneous notion should be given up, and the claims of the hand and the heart

should be considered as of equal importance as those of the head. Again, it is absurd to think that all men are alike and should be given the same kind of education. A wiser and a more humane psychology today proclaims the infinite diversity of men's gifts, and insists that each shall be given opportunities of learning commensurate with his capacities. The elaborate tests of intelligence prove that the range of human abilities and aptitudes is enormous. Therefore, to concentrate the school curriculum exclusively on the intellectual aspect without paying attention to *manual work* is not only to stunt the natural growth of children, but also to make them unfit for the complex business of life. Nature did not intend us to become clerks, journalists and philosophers, but to move about, to run, to climb and to use our limbs and arms. It is absurd to think that work is man's primeval curse. The most urgent of all our social problems today is how employment is to be found for all the university men whose learning is confined to their books exclusively; and this has brought about a new sense of the value of manual work. Consequently the hewer of wood and the drawer of water is not now despised; he is envied.

"One of man's most fundamental characteristics is the instinct of workmanship," says Prof. De Morgan, "that which marked the end of animal development and the beginning of human history was the discovery of the *Hand*. Man at his origin is the maker; man in the mass has been workman." The first thing needed to make men good, prosperous and happy is a transformation of their minds towards labour. We have to create a psychology of bodily toil—the will to work. Ruskin has pointed out that "life without industry is guilt." Education, therefore, should aim at the training of persons who will be strong in body and well-skilled in doing all kinds of manual work. In a world whose law is work, there is no escape from hard toil and manly effort.

Manual work is a contribution, service. It is a method of discipline, and even of absorption and rapture. Dignity, poise, mellowness, courage and order are the fruits of manual labour. Action is the secret of health, and health is the secret of happiness. Work makes up a large part of the worth of life. To be alive is not to keep our hearts beating, but to work, to grow, to do and to be a cause. The individual busy at work is safe both in mind and body. Where the body is strong and the mind clear, complexes will not grow. Manual work is athletic and heroic. There is no heroism without hardness; and toil is the best earner of health, rest and sleep.

It is, therefore, essential for schools to combine manual training and book-learning, and make the students do things with their

hands. The boys should be made to realise that the profession of the farmer, porter, carpenter, mason, barber, shoe-maker is as honourable as that of the lawyer or the doctor. A new outlook on manual labour is, therefore, urgently needed. Manual labour must be valued as noble activity, as heroism on the one hand and as skill and art on the other.

Hand-work, thus, besides instilling love and respect for manual labour, supplies a great opportunity for creative activity, and is the best form of self-expression. Therefore, any scheme of education that divorces hand-culture from mind-culture is only a torso, an incomplete, unfinished thing. There is today a lot of talk about freedom in schools; but it is not realised that the scope for real freedom is to be found in manual labour, which is the field for initiative, resourcefulness and inventive powers. Further, any psychologist will tell you that childhood is essentially the period of play. Children delight in all sorts of creative activity; and hand-work is the most natural and the most satisfying expression of the instinct of play. Moreover, training in hand-craft, besides relieving the monotony of the regular courses of study, would serve as an effective stimulus for the choice of an equipment for life's vocation. Let us not ignore that the main aim of education is the solving of the "bread and butter problem", and that this is as sacred as that of culture for the sake of self-realisation.

Clay-modelling, card-board work, carpentry, furniture-making, pottery, cutlery, cane-work, weaving, tailoring, needle-work, embroidery, coir-mats work, toy-making, wood-carving, ivory work etc. are fields not only for vocational investigation, but for adventure and life. Education must be released from the imprisonment within books, and take the form of making things and doing deeds. Experiments in hand-work should be introduced in all schools, and periodical Arts and Crafts Exhibitions should become a regular feature of every school. Facilities must be given to the pupils to observe and imitate the things which the elders are doing, such as house-building, drawing, painting, engraving, ploughing etc. The imitation of these activities may be amusing to them; but it is also hard work; and thus they get the habit of taking pains which is the foundation of character as well as of success in life. These forms of manual work will, in course of time, develop into hobbies or life-jobs, and thus make them independent. In the end it is the ethics of workmanship that transfigures the work of the world from a burden that crushes into a culture that ennobles mankind.

Their First Day

By X. Y. Z.



HE smile on Veda's tiny little lips made Raja expand with joy. Silent and seemingly absorbed, he watched. He knew better than disturb her simple but, to her, very important work as he sat at the charka and spun—a sight the delight of which brought the smile that Raja loved. It was a splendid day, the day after her arrival, the day on which she had untied the huge bundles, picked up the grains and began to light the fresh hearth placing new and shining vessels to cook her husband's food for the first time.

She toiled long and late to get the splinters take on the flame. Cooking, although she knew the formula, carried to her a charm and novelty all its own. Born and bred in the lap of luxury and wealth she had not had the need to know how to cook. But rich as Raja was, he scorned to ask for his father's money and settled down to earn the few rupees of a hardworking Junior to a busy City Advocate. And then had come the great movement in the country—the movement, as he held, of self-purification. Veda, who had come with great visions of love and home to start their life together, from that day naturally shared her husband's enthusiasm for self-help and simple living. Their first day of housekeeping was a joy for them both as she wrote to her mother next morning.

She toiled again, long and late to get the splinters to be kind to her and catch the blaze in the hearth. When she left kneeling and rose up her flower-soft face all aglow, with the kitchen smoke playing about her, Raja felt no pang of regret at having sent away the household cook when he first had the vision of a perfect Indian who cooked his own food, ate his simple meal, and spun and wore his own clothes. And when he saw his wife—a fresh girl, of some sixteen years or so with the loosened knot of flowers all over her shoulder and rippling laughter in her shining eyes, Raja, without a word, but with a smile went on spinning and turning the wheel without so much as lifting his eyes at her—a vision lovelier than he imagined and one he did not like to disturb and break the spell. She expected he would chide her for having exhausted half a bottle of kerosine oil in kindling the earthen stove which would not light. That was her first day of work in the kitchen and she knew she had blundered in spite of her eagerness to serve her lord the food she herself made and yes,—there was almost a sob somewhere in her. She understood that that was not the kind of start that would please Raja who was always

so cool and self-possessed. Could he forgive her in his big heart? Why could he not understand? Yes, she would go to him, in spite of his charka and the inscrutable smile. She stood up, her little figure swaying this way and that, furtively glancing at Raja, half coyish and half afraid, with the kerosine bottle in one hand and the fan in the other.



"All right, dear, carry on" nodded Raja spinning and the charka went round and round. But the little wife stood on, lost in the vision of her husband's romance of the spinning wheel. After a few minutes, the spell was broken, there was a peal of laughter that played about the house as the throbbing streaks of sunshine on the brook opposite their house.

"Fancy, a lawyer at the kitchen stove" mocked the laughing Veda, all her shyness gone.

"Yes" he retorted in mock heroic tone "if I have my first and the fairest client to plead her cause before an obdurate hearth." At this her already humorous temperament caught on the girlish laughter he heard so hearty and so bright. When she laughed like that, like the song of a fond mother cooing to its child in to the cradle from afar, no one who heard it, not her husband at any rate, remembered sorrow or sadness in the world. He stopped, glanced at her eyes, now veiled and rose from the charka.

"You are going to make fine cloths for me, my lord"? Veda joked on, still smiling at the wheel that stopped working.

"Yes" laughed Raja, as he took the bottle and fan from her long, soft fingers and added, "when you are going to cook for me like this!"

But the fire was gone when they both looked at the little mud stove and with renewed laughter they bent down and blew with their mouths together into the stubborn opening to set the wood ablaze again. They half succeeded when they failed and in a riot of laughter and fun like children they once more bent to the task, their mouth blowing and whistling.

There was a tap at the door. Veda suddenly felt in her little heart all so bright and happy, some strange fear as if someone said that sunshine was gone and was night. She rose, gathered up her folds of cloth, opened the door and retired into the room, when Raja came forward to receive the visitor—the Sub-Inspector of Police.

Then Raja knew. He knew what that meant in those days of political unrest and excitement. He knew that he had joined the glorious band of India's sufferers and from that day to that on which India was going to be free, there was to be nothing but suffering, suffering all along, for India's path lay through suffering and sacrifice and not violence and bloodshed. When the call came, Raja had flung away his gown and all and had "joined up."

Veda, in the room, heard the conversation quite clearly. She got a growing fear and she slightly shivered as if she suddenly got cold. She did not understand anything but the one big fact—her husband and her lord and her perfect lover. She did not understand a syllable of the fire-side oratory he let fall on the country's condition, she could not for the life of her make out the mystery of boycott or 'satyagraha.' The sight of her young husband turning a wheel and trying his might and main to pull out a single thread without break out of the cotton he held in his fingers was a huge joke to her and when she heard him deal with India's poverty, the drunkenness and the ignorance there was everywhere, she thought what a great profession law must be to make young men talk so big and high, but when he whispered into her little ears, half hidden under the stray wisps of rebellious

hair, that a lovely lady called India was shedding tears and was in trouble owing to the misery of her children, she understood and flashed back a look. All this recollection came to her as she stood there in that little room listening to the conversation between the police officer and her smiling husband.

The Sub-Inspector, a kindly good natured soul, was not the sort of blighter to spoil the first honeymoon days of a newly-started home.

"There was some one like you yesterday, at the toddy shop picketing" began the Inspector.

"Look here, Sir".....

"That's alright," interrupted the Police Officer brusquely and turning to another man who had followed him inside the house, he nodded, "you see? I told you, it was not Raja but you persist that you will include his name in your report to the Magistrate. I can disprove it, of course". And he addressed the young man, glancing at the shy bride in the room, "you were with me at the railway station at the time, is it not so, Raja?"

The other man—he was the toddy-shop owner, was watching as were Veda and the Sub-Inspector. One little lie, one little "yes" and Raja was safe. Veda's face behind the half-open door was tense and to Raja it looked just then divine as if his family goddess was looking on. Will he open his mouth, utter this tiny little untruth and escape or—

"No" burst forth from the lips of the brave Veda's husband. "I was at the station later but I was with the picketers alright, Inspector, do your duty" and Raja came over to the men.

Veda heaved a deep sigh and smiled at her lover in a way that made him see a vision and hear a song somewhere deep inside him exquisite and unforgettable and as the smile sank into his soul with the serenity of heaven he heard the Inspector say to him:

"Raja, with a lovely fairy like that in a home, no man could do wrong, there would be no adharma". He took the young man gently out—a minute before the little girl sank on the floor and wept.

Raja got six months.

"They have taken my Raja away," Veda was saying to her sorrowing mother in the car that came to take her to her parents' home that day late in the evening, "but he is a Sathyavan, a true satyagrahi, don't you understand, mother, and that is my lord all over"? Laying her aching head once again wiping her tears, on her mother's bosom. All was quiet that day in the big bungalow that was Veda's home.

Little Veda is with her mother now and waiting. Has Raja returned?

Formation of Tubercles in Water Mains

Its Bearing on Water Engineering

By S. C. PILLAI, B. A., A. I. I. Sc.,

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HE rapid growth of urban communities and the increasing demand of wholesome water for household use and manufacturing purposes in recent years have given rise to a number of problems in water engineering, the most important of which are perhaps those relating to proper purification of water and its distribution. The difficulties in these directions are so numerous and varied that a large number of sciences are offering contributions to the theory and practice of water purification and also in regard to its extensive distribution.

The fact that pure water is not only desirable but quite essential in the interests of health, has instigated intensive work on water purification, and the modern practice of treating impure water calls for a varied range of technical knowledge. However, the recent advances in the sciences of bacteriology, biochemistry, and hygiene, have made possible the achievement of the desired degree of purity of drinking water and the difficulties which beset the question of public health have also been handled with success.

Considerable progress has thus been made during the past few decades in the domain of water purification. But further improvements and larger developments in this direction, which have become quite necessary due to the steady increase of population of cities and manufacturing districts, naturally raise many more technical problems. Such are the design and construction of suitable reservoirs, basins, filters and distribution systems; the maintenance of the efficiency of storage reservoirs and water mains; the control of the various chemical changes and biological growths inside the entire water system; the protection of pipes and fittings from internal and external corrosion; and the control of several other troublesome factors at work in the reservoirs, filterbeds and service mains. Furthermore, these have a direct bearing on the treatment of water and its potability, and consequently on the general public health itself.

Of more immediate concern to the water undertakers at the present time is the problem of internal corrosion of the pipe material, and particularly the subsequent transformation of the corrosion products into a variety of deposits or incrustations on the inner surface of pipes; for, with the increasing usage of cast

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iron pipes—cast iron is the most extensively used material for manufacturing water pipes—this has become a growing problem of tremendous economic and technical importance. As the result of the formation of what are better known as the tubercles or nodules from the products of corrosion, the working life and more especially the water-carrying capacity of the pipe is reduced to a great extent. It is reckoned that, within a few years after laying the pipes, the carrying capacity is often reduced by over fifty per cent, so that the efficiency of service suffers considerably especially at the farthestmost points of municipal supply, and that the annual loss to the water works department through repairs and replacements on this account is often enormous.

It has been the experience of the water engineers and chemists that this process of tuberculation, starts practically soon after the installation of the water distribution system. The protective coating on the inside of pipes which consists mainly of tar or asphalt is disturbed and slowly removed by the current of water, giving rise to points of bare iron. Just at these exposed points the corrosive elements present in the water like the dissolved oxygen and carbon dioxide attack, and the corrosion of iron takes place appearing at first in the form of small blisters. While the forces which bring about these changes in the substance of the iron continue to operate, the products of corrosion (mostly ferric hydroxide) formed at the various points are subjected to the influence of certain forms of life derived from the surrounding water, and are eventually shaped into the ferruginous tubercles, as has been shown by the investigations recently carried out in this laboratory.

Beginning as a sort of vesiculation or a minute projection, each tubercle develops on the pipe surface putting on layers (consisting of the corrosion products and other constituents from the water) one above the other in order to finally give a roughly conical structure about an inch and a half thick. It may also be observed that the tubercles are so strongly built and so firmly attached to the pipe surface that they are not washed away by the flowing water, however strong the current of water might be; they admirably maintain their continued existence in the water system. Naturally, the inner surface of the pipe gradually becomes studded with these nodular excrescences just as a ship's bottom does with barnacles; and, if preventive measures are not adopted, they become confluent, the result being a considerable decrease in the bore of the pipe and the production of a softening effect on the iron.

As the interior surface of the pipe thus becomes roughened a considerable amount of ineffective velocity is developed and under certain rates of flow, the available effective or working area

of the pipe is also considerably reduced. Besides, the flow of water is gradually obstructed and the meters are consequently affected. Eventually, when the pipe gets heavily tuberculated, it is not serving the purpose for which it was designed.

From the foregoing observations, it would appear that tuberculation is primarily a question of corrosion. The mechanism of corrosion and more particularly of its prevention has been a subject of intensive study at several centres all over the world. The importance to preventive engineering of arresting the rapid decay of iron by corrosion need hardly be emphasised. From the available data regarding the average annual renewal of pipe lines and similar iron works subject to severe corrosion, of course owing to inadequate protection, it may be stated that the annual replacement from this cause, on the average, may reach as much as two per cent. of the total tonnage in use, and that the cost of this wastage may amount to several millions of pounds. This rate of wastage of the metal would mean that a large and increasing proportion of the annual production will be required to replace that rendered unserviceable by corrosion, the fact remaining that the ore supply is more rapidly depleted.

Undoubtedly a great deal of work has been done of recent years in controlling the ravages of corrosion by the use of improved protective coatings for the metal. But, along purely metallurgical lines, little has been accomplished although metals resistant to corrosion have been developed which are applicable for certain special purposes where cost is a minor consideration. At any rate, with regard to ordinary iron for general use, no satisfactory method of solving the problem has been evolved up to the present time. This may probably be due to the fact that the tendency to rust and disintegrate is a characteristic remarkably inherent in the element of iron—'Nature, in conformity with her usual benevolence, has limited the power of iron, by inflicting upon it the punishment of rust'.

However, judging from the facts and principles already established with reference to corrosion, it would appear that methods of its prevention should involve, depending upon the conditions, a choice between using a more durable material for making the water mains, a more effective protective coating, or, in certain cases, reconditioning the water so that it will form a natural protective coating or be much less active towards the metal. It may, nevertheless, be hoped that the final solution of the corrosion problem and the development of the most effective method of prevention of corrosion under all circumstances, will be an accomplished fact on some future day by the co-operation of chemists, engineers, manufacturers, and architects.



By Nicholas Roerich.

"COMPASSION"

Hand Paper Manufacture

By V. S. KRISHNASWAMY, I. F. S.



WITH the revival of public interest in "Hand paper manufacture" and the possibility of its being organised as a cottage industry in India, the readers of *The Scholar* will no doubt be interested to know something about the manufacturing processes.

The chief source of the world's supply of paper is from wood pulp manufactured from the *spruce* and *fir* trees of Europe and North America. As a result of the rapid disafforestation of the more accessible areas in those countries and the increased values such timbers now have for constructional purposes, the quantity available for pulping has been seriously reduced and its cost enhanced to a price which the paper maker can scarcely afford to pay. He is, therefore, interested in finding out alternate sources of supply and such a supply exists in the *Graminae* occurring in the tropical and sub-tropical countries of the world. Now *Graminae* which includes grasses and bamboos are available in India and by utilising them for manufacturing paper, the country can be made not only less dependent on supplies from abroad but also supply external markets. Of the grasses, nonfodder grasses which are usually fibrous are used in paper industry. In addition to the above, cotton and linen rags and waste papers may be used also, but their supplies are necessarily limited.

There are two kinds of pulp obtained from wood. One is called the chemical wood pulp, which consists of cellulose obtained by boiling wood fibres with chemicals. The other is the mechanical pulp, which is extensively used for news and cheap printing. This is not a true pulp, but merely a ground wood containing all the wood constituents and, therefore, unbleachable. For this reason only trees having light coloured heartwood are used. Whatever be the nature of the raw material used and whether the paper is made by hand or machinery, the processes are practically the same. The first stage of manufacture consists in the preparation of fibre. The raw material is sorted and cut and mechanically cleaned. Then this cleaned material is boiled with certain chemicals which dissolve the non-cellulose matter, leaving only the cellulose, in a bleached state.

The second stage consists in further *beating* the bleached stuff, *loading* it with certain mineral substances and *sizing* and *colouring* it.

The third stage is the conversion of the prepared paper material into the finished product.

The whole gamut of the manufacture of paper by hand is given below.

First the different kinds of raw material are sorted. In the case of grasses, the roots and weeds have to be removed. Then the material has to be cut and dusted, to remove dirt and sand. The cleaned material is now ready for the chemical processes. It is boiled, generally in a solution of Caustic soda, the strength of which varies according to the kind of raw material used. The object of this boiling with an alkali is to soften the material and remove all fat and oil, wax, gums, resins and colouring principles always associated with plant fibres. These substances are usually insoluble in water but readily soluble in an alkali solution. The used up alkali solution can be used again, after recovery by suitable methods.

After this preliminary boiling, the softened and chemically purified fibre is repeatedly washed in clean water and then broken. In hand process this is done by a pestle of the type used in preparing "beaten rice" (அவுல்). After the fibre is beaten into small shreds by this process, it is bleached, usually in a Bleaching powder solution. To ensure proper permeation of the Caustic soda lye and the bleaching solution, the material has to be constantly agitated by a wooden bat.

The bleached material is again washed in clean water and again beaten, so that the pulp may be further torn and broken into smaller and finer shreds of about one or two millimeters in length. This process is to be repeated, till a clean white pulp is obtained. Bleaching has to be done only in weak solutions to prevent damage to the fibre. After the bleaching process is over, the paper pulp has again to be washed to remove traces of the bleaching reagent.

The pulp is now ready for being made into paper. It is put into a vat and clean water is poured on it. The pulp is stirred with a bamboo stick or a wooden bat, for a sufficiently long time to distribute it uniformly, breaking any lumps and separating the individual fibres. The resultant mixture should be sufficiently thin.

The mould for hand made paper consists of a wooden frame, depending on the size of the paper to be made, having a bottom made of wire gauze and provided with a deckle placed on all the four sides to regulate the length and the breadth of the sheet. The mould and the deckle placed in position, forms a wire gauze tray and this is dipped into the mixture of pulp and water contained in the vat. The required quantity of pulp is taken up. The frame is shaken to help the proper distribution of the fibres on the wire gauze. A thin sheet of paper is thus formed, the excess of water draining away through the meshes. The deckle is now removed and the mould with wet sheet, is turned over a piece of

felt or some other non-absorbent, soft material. A pile of these is made, each sheet of paper alternating with a sheet of felt, and put under a press. A great part of the moisture is thus removed and the sheets get consolidated. Next the sheets are separated from the pieces of felt and rearranged in the form of a pile and subjected again to pressure in the press. By this process the felt marks on the sheets of paper are removed, most of the moisture got rid of and a better surface secured. The sheets are then dried in air in a room by suspending them over ropes made either of cow's or horse's hairs, which do not leave any stain.

The paper thus obtained will be partially absorbent and, therefore, it has to be sized. Sizing can be done either with starch or glue or with rosin. The starch is mixed with water and then heated over a slow fire and continually stirred, so as not to form lumps. When the paste is about to boil, solutions of alum and copper sulphate are added separately and the mixture stirred well. Then without further boiling, the mixture is taken away from the fire and cooled. When cool, it is applied to the paper either with a soft cloth or with a soft brush and dried. Sizing with glue is also done similarly, only that copper sulphate is not added. Sizing with rosin is however different, in that it is not given to the paper after it has been made, but added directly to the finally prepared pulp before the paper is made.

After sizing, the paper has to be polished. This can be done either by rubbing vigorously any hard, smooth surface (pebble, or conch shell) over the paper, or by the Dhoby's iron. Then the paper is sorted and reamed.

Hand manufacture of paper is not a new industry in India. Even now the Marwaris invariably use hand-made paper, on account of its durability. The writer has seen a hand-made paper nearly 150 years old, still in good state of preservation. This cannot be said of machine-made paper. The All-India Village Industries' Association, Wardha, are interested in developing this as a cottage industry and are training workers for the same.

The raw materials necessary can be got in any village at little or no expense and the apparatus required is not costly. A beginning may be made in the various schools and colleges of this presidency and with more people knowing the process of manufacture of paper, there are more chances of the industry spreading into the villages. At any rate when our students realise the patience and trouble involved in "Hand paper manufacture", there will be more economical and discriminating use of paper and less of them going into that useful institution of modern civilisation, the waste paper basket.

Watching the Cosmic Motion Picture of Life

By YOGANANDA PARAMAHAMSA

(Founder, Yogoda Sat-Sanga of India and America)



IN this hall of life, we are all moving picture actors as well as movie fans. We entertain, inspire, and instruct others with the show of our experiences, and we ourselves watch the ever-changing interesting pictures of other lives.

The pictures of various events are filmed in the east, west, north and south. The various nations with their strange and colorful actings of diverse customs, traditions and occupations amid varying scenic and climatic environments, offer infinitely rich and inexhaustible material for producing life-films of ever new interest.

Educational, sensational, comical, saddening and inspiring pictures are taken by the mind-camera of the average man, every day, any time, anywhere. There are many comic films in life. Inspiring scenes help us when we behold the unrolled film of lives of great men like Lincoln, Gandhi, Lindbergh, Emerson and thousands of other unique personalities, as well as the heroic figures of the religious teachers of the world, like Buddha, Zoroaster, Confucius, Mohammed, Krishna, Jesus and others.

We watch, moved and entertained, the mental movie pictures as filmed in Shakespearean tragedies and other great dramatic writings, in the house of our imagination. The pictures of world events, daily facts, evoked by our newspapers, hold our passing interest. The pictures of others' sufferings bring a tear, a determination to help them. Through their sorrow, we find our own joy in helping them. The gods sympathize with and entertain themselves with the joy of helping mortals. If they cried, and became identified with the tears of others, they could not render help. For sorrow increases sorrow, which can only be diminished and healed through contact with the potent salve of unshakable happy minds. Hence in watching tragic mistakes or misfortunes of other lives or of our own, we should feel only tears of joy because of our ability and absolute power to help. There cannot be room for the dark disturbing emotion of grief in children made in the likeness of God.

Individuals who are highly nervous, or who are suffering with the malady of melancholia or anaemic pessimism, or who are

stricken with spells of despair at the approach of the least difficulties of life—these do not profit by watching the pictures of tragedy in other lives. They will have fainting spells; they cannot thus learn the lesson of the result of wrong behaviour and thus desist from error, nor can they render help to those who are suffering, since they themselves are not free from suffering.

Thus, one must be thoroughly prepared mentally to profitably watch the motion picture of the tragedy of trying experiences in others' lives, in order to be able to render help in making others look upon life as only a picture for our entertainment and instruction.

The great wars of Europe and Asia, the natural cataclysms of earthquakes and floods, the famines, prosperous eras, influence of world-saints, statesmen and villains, the work of the colossal geniuses of the ages—the poets, business men, writers, courageous reformers, great lovers and heroes—these events and these natures all played their parts in the studio of the centuries.

Everything took time, everything seemed to last long to the consciousness of man. Each life seemed almost unending, each great event was all-absorbing, but when the Director of life called "Cut!" the film was over. The greatest lives, the complex knotted existences, the whole history of nations, your life and mine, past, present and future (if we could but see), which seem to drag on minutely, surely, slowly, could nevertheless be filmed and each life shown in a couple of hours. One's life, lived through a hundred years, seems so long-drawn-out when taken through the slow mental camera, but with the fast camera of true retrospection, one sees the whole panorama at a glance.

Is this life a movie show? The millions of geologic years, the constellations of heaven, the floating vapours, atomic combinations, earth materials, oceans, continents, nations and their histories, millions of births and the almost complete change by death every hundred years of all the earth's inhabitants, the various great intellectual, spiritual and material civilizations, their rise and fall—with this background, we can see all life as a vast ever-changing, ever-new, ever-entertaining mighty film in the hall of introspection. This life is a Super-Cinema, shown in serials and by instalments, infinitely interesting, ever-fresh, ever-stirring, ever-complex. The master minds and world-changing men like Jesus, Buddha, Socrates, Asoka, Mohammad, Caesar, Darwin, Copernicus, Galileo, Newton and many other outstanding pioneers and leaders, are the great stars of the motion picture productions, who command universal attention from their audiences.

The pictures of life must be always different to be interesting. One does not want to see the same comedies of lives or the same newsreels of prosaic facts or the same tragedies of harrowing or gruesome experiences, all the time. One wants variety, and can hardly bear to see the same picture twice. That is why the Great Director of the motion picture of life keeps everything changing. You cannot drink twice from the same running water, you cannot watch the same event twice. The water passes by; the events change; you are not now the same man as you were a second ago—your thoughts have changed, your sum total is in a different proportion.

Why not then take life simply as a motion picture show? To do that, you must steel your mind against sorrow. You must be prepared for variety. You must be a motion picture player, an entertainer, as well as one of the audience, in watching your own and others' pictures. While playing the part of combating disease, or fighting failures, or undergoing accidents, or enduring the trials of life, you must know you are just playing a part.

Just as an actor in the moving pictures is untouched by the sorrow he has to depict in his characters, so must you remain untouched by the changing pictures of inevitable misfortune, sickness, sudden failure, and unforeseen obstacles in life. Sickness, failure and grief are so simply by the relative standards of human consciousness. A disciplined consciousness, united to cosmic consciousness, never inwardly experiences sickness or suffering or failure. As God's children, we are always perfect and we must recover that consciousness by wisdom and true understanding of the meaning of life and its problems.

Care not if you are not the principal player in the movies of life. No movie picture is made up of only one player or one event. Your part in playing, if short or obscure, is yet very important, for without you the picture of life is incomplete. In the Universal Director's eyes, he who plays his life's part well, whatever that may be, is made a star to shine in his immortal galaxy.

Our troubles mostly spring from not knowing what our parts are. This results from not developing our innate intuitive soul-faculties. Rouse the all-feeling, all-seeing Wisdom by regular meditation, and find your part. Then you must play or watch your own playing or the playing of others, be it the newsreel of plain facts or a comedy of errors, or the tragedy of trying experiences, with an inwardly entertained mind. This is no room for pain, grievance or boredom in watching the movie of our own life. The retrospective consciousness of man can play all the

noble parts of life joyously, untouched by suffering. These cosmic movies are all for our entertainment.

The great Director of the Motion Picture Company of Life is made of Joy. We, as His children, are made in His image of joy. From joy we came, in joy we live, in joy we melt. He brought out this cosmic motion picture to keep Himself entertained. We, having come out of His being, are endowed with the same quality of superconsciousness by which we can watch the pictures of life, of birth, death and world events with the same divinely enjoying spirit. You watch a tragedy in a motion picture house, and when it is over, you say, "O, it was a fine picture!" So must you be able to look upon the pictures of trials of your own life and say, "O, my life is interesting with troubles and difficulties to be overcome. These are all my stimulants to show me my errors and help me to assume the right mental attitude by which I can watch with joy the fascinating spectacle of life."

The consciousness of man is made of God and is pain-proof. All physical and mental sufferings come by identification, imagination, and wrong human habits of thinking. We have to travel along the labyrinthine path of life, visiting many motion picture houses of varied experience, entering them with the consciousness of being entertained and instructed. Then life and death will be watched with an unchangeable, joyous consciousness. Our consciousness we will find to be one with cosmic consciousness. And with our cosmic consciousness, unchanged by the human waking of birth on the sleep of death, we will watch the Cosmic Motion Picture with perennial, ever-new Joy.

"I"

I was in the beginning
 Before all creation.
 I was alone
 And felt lonely.
 I willed to see myself
 Then saw my life
 And found myself good.
 The will to see increased.
 I became space and time
 And found myself joyous.
 Between willing
 And becoming
 I was then caught ;
 And out of the play of opposites
 In space and time
 Came all the worlds
 Invisible and visible,
 In endless succession
 And variance
 Till I, the infinitely great,
 Became the infinitely small also.
 And I now range
 Between these infinite extremes
 To have experience infinite.
 The world is but one
 Infinitely varied experience of mine
 Till I cease from willing
 To sport myself in the opposites
 And diversified extremes,
 And make myself at last
 As if I were nought,
 Never willed, never sported.

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Kamal Ataturk



ON November 10, Modern Turkey suffered her greatest bereavement by the passing away of the strong man who raised her to her present position ; and one naturally looked back over well nigh two decades packed with solid constructive work, with admiring amazement.

Born in 1880, in the small town of Salonica, to poor parents, Kamal grew up a bright intelligent boy. He lost his father very early in life. His mother, a remarkable woman, put him to school. He shone well in his class and won the admiration of his teacher. But academic education was not his forte. He soon fled from the school and joined the Staff School in Salonica. There he found his calling and graduated in 1905 as Captain.

The prodigious energy of the man now sought an outlet ; and Turkey had need for it. The last of the Ottomans was sitting on the top of the volcano of despotic power, little conscious of the smouldering fire beneath. By now Kamal had made enough noise to attract the attention of the authorities, and soon after his military graduation he was imprisoned and exiled. But the irrepressible rebel escaped. A change of ministry brought him into the army. The Great War came on and Gallipoli proved his mettle.

Kamal's rapid ascent to power began soon after the war. He formed a national party in 1919 and set to work with a grim earnestness. The smouldering fire gathered strength and grew into devouring flames till at last the volcano burst and hurled the Sultan right out of the land. Kamal put an end to Ottoman despotism and the Caliphate.

The Treaty of Sevres gave Smyrna to the Greeks. Kamal now set to work to undo this disgrace. In August 1922, he routed the Greeks in the battle at Afium Qarahisar. The Treaty of Sevres was replaced by the Treaty of Lausanne, which is considered a high diplomatic achievement. In October, 1923, Turkey was proclaimed a Republic, and Kamal was elected President. The Kurdish revolt of 1926 enabled him to further consolidate his position. He was again and again re-elected President.

Kamal Ataturk died in harness. Indeed, it is almost impossible to conceive of him as a spent force. The list of his achievements is, indeed, formidable. Many a time in the past 'the sick man of Europe' had reached death's door and it had seemed that the time had come to prepare for his obsequies. But he was not destined to die an inglorious death. The healer came at last and

in about two decades the moribund body took on the bloom of youth and is now almost an athlete.

The energising efforts of Kamal embraced all aspects of Turkish life. He brought about a thorough Westernisation, which touched even the mode of dress of the people. Education became widespread and the Latin script was adopted. He was responsible for the first census taken in Turkey. Agriculture and industry saw great progress. In 1934, women were enfranchised.

True, he was a dictator. But from Hitler or Mussolini to Kamal Ataturk is a far cry. He was not of the fire-eating sort. He had power. But more than that, he had the generous will to employ it to constructive purposes. After long years of grinding despotism, the Turkish people breathed free air. It was given to Kamal to reclaim the land from decay and place her on the high road to progress and prosperity. The trail of history is not all gold; but amidst numerous patches of black, one finds occasionally one of gold. Kamal has contributed a glistening patch indeed.

S. V.

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THE ARTIST

Mr. M. Gopalakrishna Gokhale is a native of Guntur Dt. He was a student of the Madras School of Arts till recently and has specialised in Portrait Painting. Secured the first prize for one of his water-colour portraits in the Madras Fine Arts Exhibition in the year 1936. He is aged 20.



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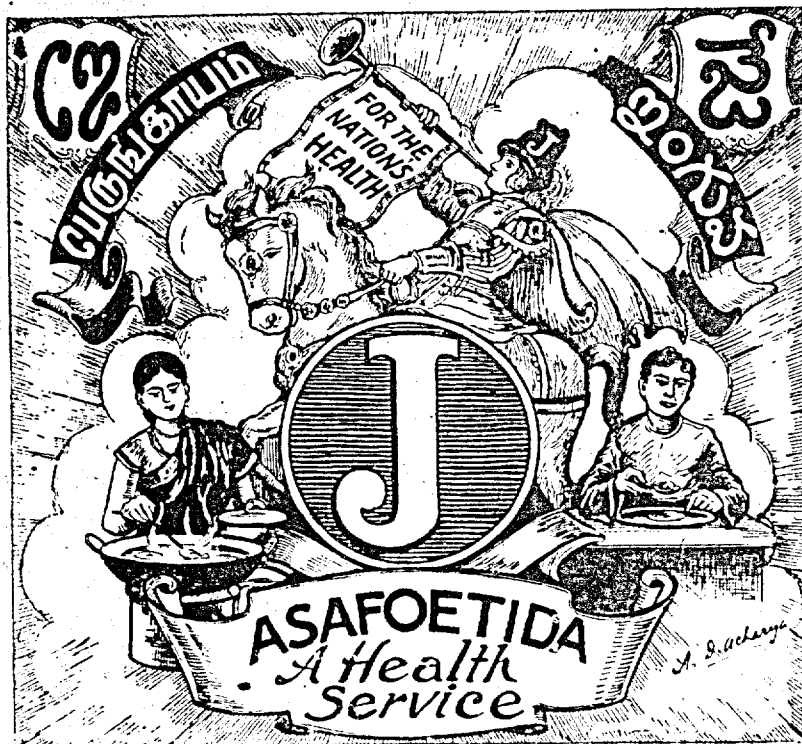
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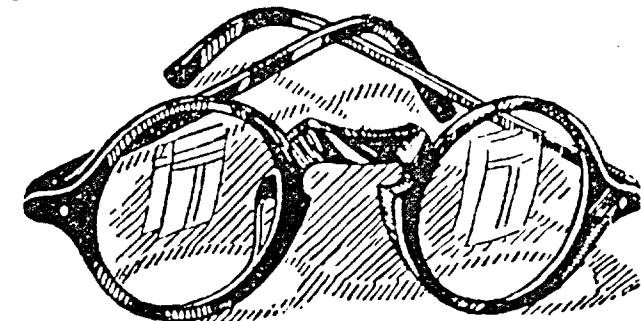
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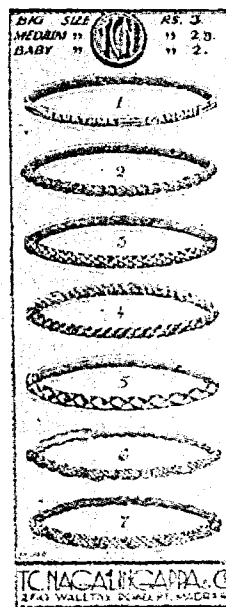
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