KERALA SASTRA SAHITYA PARISHAD

Yesterday, Today, Tomorrow

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An Introduction In First Person

October 4, 1957. Myself, my friend M.R. Kurup and a few others were relaxing on the rocky shores of Bandra beach, Bombay, part of the Atomic Energy Establishment Training School Campus. We were the trainees of the first batch. Somebody brought us the exciting news: the Soviet Union has orbited the first man made sputnik, weighing 82 kilograms.

They were ahead of the USA by six months and by several kilos. Kurup and myself decided then and there to learn Russian and next month we joined the Russian language course organised by the ISCUS (Indo Soviet Cultural Society)

This was, later, to affect my entire life career in a profound manner. I decided that I should go to the USSR for higher studies and was lucky to have been able to do so. That was from 1962 to 1965. In the Soviet Union I had the opportunity to study their history, struggles, travails, achievements and aspirations. I have seen how well the children were looked after. I have seen how secure the life of citizens were. I felt that if there is a paradise on this earth this is it. Of course it was not the mythical paradise of the Hindu god Indra-the conspicuous consumer. That paradise was perhaps the USA, with more consumer goods than necessary, with enormous wastage, with competition and constant threat of losing ones grounds. (It is a pity that the Soviet people later opted for this western paradise and in the bargain lost everything).

Some of us, the postgraduate students in Moscow, felt that on going back to India we should do something more for the people than is demanded by our paid profession. There were hectic and heated discussions, with many absurd propositions like floating a political party led by electrical engineers and the like. One not too revolutionary sounding suggestion was that we should initiate an organized movement for the development of scientific and technical literature in Indian languages. And I took the responsibility of initiating such a movement for Malayalam, being my mother tongue and Marathi, being the language of my domiciliary background.

On my return to India I straight away went to Trichur, Kerala and met the Manager of Mangalodayam Publishers who had published my first book, "Isotopes and Radioactivity" and the second book: "Atomic Science". I discussed with him my idea of starting an organization for the promotion of scientific and technical literature in Malayalam. It was he who then pointed out to me that there is no necessity to start a new organization, that there is already the Kerala Sastra Sahitya Parishad (KSSP). He gave me the contacts of all important activists. I met all of them within a span of two weeks and soon I became a part of the team. For the past 28 years I have worked with the KSSP. It has changed me, changed me radically.

The KSSP in Retrospect

The history of the KSSP is, in one sense, the history of the experiences of a movement which learns continuously, which is not restricted by fossilized objectives or concepts. Its growth during the past 30 years has been from abstract to concrete, on the one hand and from particular to general on the other. There is a seeming contradiction. It started with the abstract understanding that knowledge about the laws of nature and society will be useful to the society. In the course of three decades this developed into a concrete analysis of the society, of the role of Science and Technology (S&T) in it, of the problems of development, of the changing world situation and of the concrete manner in which the havenots can use scientific and technical knowledge as a weapon in their fight against immiserization. On the other hand it started with particular activities like lectures, publications, exhibitions for dissemination of scientific information, activities like science clubs, teacher training etc and gradually grew into discussions on the general aspects of development, environment, health, education and so on.

Rarely was it handicapped by a mechanical understanding of the past, present or future. Nor did it restrict its scope to any particular field - say education or health, environment or development. It assimilated newer and newer ideas and also the proponents of these ideas. The chronological history of the KSSP will reveal a step by step expansion of the scope of its activities as well as absorption of those persons who came up with new ideas into its core.

In 1974 the KSSP adopted the slogan "Science for Social Revolution" and in 1978 christened itself and like minded organizations – there were a few of them by that time – People's Science Movement. The like mindedness emerges from the acceptance of the meaning of People's Science Movement.

It is a *People's* movement in the sense that it recognizes the fact that the Indian society is broadly divided into two groups: a large majority which is getting continuously impoverished or threatened with impoverishment and a small minority which gets continuously enriched at the expense of the majority and that the movement takes a partisan position along with the majority (The People) and against the minority whenever interests are in conflict.

It is a *Science* movement because it understands that science (and technology) – information – is today a powerful weapon in the hands of the rich minority enabling them to appropriate for themselves a more than proportionate share of social production,

and that the majority should be armed with this weapon in their fight against impoverishment.

It is *Movement* in as much as its scope widens continuously, its actors diversify and expand, and its ideology gets refined continuously.

The experience during the decade 1978 to 1987 gave much more clarity to the concept of "Social Revolution". It is a reversal of the process of impoverishment of the majority and enrichment of the minority. Two decades of activity and the experience gained therefrom led the KSSP to a serious discussion on the concept of "development". Increase in per capita income or percapita consumption is not equivalent to development. All goods and services which have exchange values and even use values need not have welfare values. The resources of the world will not suffice to take the entire humanity to the consumption levels of the developed nations, nor is it necessary. One of the causes of the disillusionment and consequent break up of the erstwhile socialist states was the systematic building up of the illusion that communism means an over abundance of *every* sort of commodity and service and the neglect of its moral-ethical character. No society can progress towards ideal communism, unless it continuously learns to distinguish needs from greeds. The people's science movement was gradually getting transformed into a Gyan Vigyan movement. Gyan in Hindi language means wisdom and Vigyan means knowledge. The people's science movement recognised the danger of using knowledge without wisdom.

The people's science movements took note of the increasing degree of globalization of human society, made possible by technological revolution and made necessary by the growth of giant transnational enterprises. It also observed that this global network has begun to exhibit positive feedback tendencies, and resulting instabilities. Individual citizens are becoming helpless pawns in the hands of giant enterprises. Humanity has reached a seemingly absurd situation: on the one hand it is at the threshold of liberation, liberation from all wants and privations and on the other hand it is at the crossroads of calamities: social, cultural, philosophical and environmental calamities. Unless human beings get back the control over their own lives, it is the road of calamities that humanity will follow. Here, democracy becomes the key concept, a type of democracy quite different from all what we have seen so far. The second, and perhaps the more important, reason for the downfall of socialist states is the absence of internal democracy. Participative and creative democracy is possible only on smaller scales. Small has to become powerful, not only beautiful.

Genesis of the Kerala Sastra Sahitya Parishad: 1957-1967

The genesis of the Kerala Sastra Sahitya Parishad can be traced to the formation of a "Science Literary Forum" (Sastra Sahitya Samithi) in 1957 by a group of concerned social activists and science writers. Despite the best intentions this pioneering attempt proved to be uneventful but for the publication of a book: "Modern Science" in Malayalam modelled after the Penguin Science News Series. Later in 1962, another group of science writers in Calicut, not aware of the earlier efforts took initiative to organise a "Forum for Science Writers". They were able to win the co-operation of most of the leading science writers in the state and in September 1962 the Kerala Sastra Sahitya

Parishad (subtitled in English as "Science Writers' Forum of Kerala") was launched with a one day seminar and a five day exhibition on science and science books. Ocassional symposia and seminars mostly organized in and around Calicut constituted the main activity of the group for the next two years.

Meanwhile, in 1966, some of the Malayali scientists in Bombay had begun to actively consider the possibilities of producing science literature in Malayalam. The contact between the Bombay scientists and the organizers of the Kerala Sastra Sahitya Parishad led to the formation of the Sastra Sahitya Parishad (Malayalam), Bombay in January 1966. Similar organizations were formed for other regional languages and they were sought to the co-ordinated through a "Federation of Indian Languages Science Associations" (FILSA), the first version of the All India People's Science Network (AIPSN) which was to emerge in the late eighties. SSP (Malayalam), Bombay was the most active among these groups.

Though Kerala was well endowed with a widespread school education system, it severely lagged behind in centres of higher learning. Therefore the number of practising scientists whom the organization could call upon was very much limited. The active collaboration of the KSSP with non-resident Malayalee scientists helped to an extent to remove this deficiency. A few among them were beginning to question the relevance of their scientific practice which they found to have very little relation to the genuine and pressing needs of the common man. Though no one challenged the needs for research in frontier areas and building up of indigenous technological capability, the neglect of problems faced by the poor and oppressed majority appalled them. Many of them worked in the Department of Atomic Energy which together with Departments of Space and Defence cornered most of the research funds. Some had even started to move towards critique of the directions in which their own advanced research was moving. The author of the present paper finally left his research career to go back to Kerala to participate more actively in the science movement.

Another affiliated group was formed in Bangalore in February 1968. It consisted of Malayalee scientists who were working in various Departments of the Indian Institute of Science. A few months later, a similar group was organized in Calcutta consisting mostly of scientists working in the Botanical Survey of India and Zoological Survey of India.

The 4th annual conference at Trichur in 1967 was an important milestone in the history of the KSSP. The conference which included representatives from the Bombay group considered and approved a constitution for the organization and in July 1968 KSSP was registered under the Charitable Societies Act. Thus, by the end of the first decade, the loosely knit science group evolved into a well defined organization.

Making a Mass Movement: 1967-1977

The second decade saw the growth of the organization into a mass movement. All the basic contours of the present day activities, organizational structure and style of functioning evolved during this period.

Science in Malayalam

The main theme of discussion of the 4th Annual Conference was the "Problems of Technical Words in Malayalam". The discussions centered around the reasons for the technical backwardness of Indian languages, the urgent need to overcome them and the broad guidelines for such a programme of action. The conference even set a time bound programme for preparation of a technical glossary of 50,000 words in Malayalam. An annotated bibliography of science books and an introduction to science writers in Malayalam were prepared. But it was evident that the task was not something that could be shouldered by a voluntary group alone.

The Parishad vigorously campaigned for making Malayalam the medium of instruction and administration at all levels. The first agitational action of the Parishad – demonstration before the University Senate and a mass memorandum to the government – were around these demands. These were also the first formal criticisms raised by Parishad regarding government policies. Despite the many declarations, the central government was paying little attention to development of Indian languages other than Hindi. Within the state English continued to reign supreme.

A turning point came in 1967. Dr. Triguna Sen, the first non Hindi Education Minister at the Centre, departed from the tradition by allocating a significant amount of financial resources for the development of regional languages. The then state government in Kerala made use of the grant so received to set up a State Institute of Languages in Trivandrum with a mandate to plan and develop scientific literature in Malayalam. More importantly, most of the technical personnel for the Institute were recruited from among the active members of the Parishad in Kerala and outside. It facilitated the formation of a collective of KSSP activists at Trivandrum as well as a period of fruitful collaboration between the KSSP and the Language Institute.

The involvement of a group of socially committed activists turned the institute into a beehive of activity and it achieved remarkable progress within a short span of time. The first publications of the State Institute of Languages, VIJNANA SABDAVALI (Glossory of terms in Natural Sciences) and MANAVIKA SABDAVALI (Glossary of terms in Social Sciences) were largely the result of the work done by the KSSP during 1967-69. Several dozen seminars, symposia and workshops were organized under the joint auspices of the KSSP and the Institute. A number of "workshops" were conducted to translate science books from English to Malayalam.

Publications

SASTRAGATHY, the quarterly journal of the Parishad continued to be published uninterruptedly from 1966, despite serious financial difficulties. The deliberations in the 5th Annual Conference at Trivandrum revealed the urgent need for a science journal catering to school children. Firstly, it was difficult to run a common science journal for all age groups. Secondly, Sastragathy was a quarterly which also served organizational functions. Thus Sastra Keralam was born in 1969. The 7th Annual Conference at Shornur in 1970 decided to start yet another science journal *Eureka* for the age group 8 to 12. *Sastragathy* was made into a bimonthly and finally in 1974, a monthly journal. The

readership of *Sastragathy* consisted of Parishad members and the general public above the school age.

Parishad entered into the field of book publication with great reservation and hesitation. "Science 1968", the first book published by the Parishad was distributed by another publishing firm. Dissatisfaction with such an arrangement promoted Parishad to sponsor a co-operative society, "Scientific, Technical and Educational Publishing Co-operative Society" in 1971. However, STEPS was found inadequate to carry out the programme of publication that tended to become more and more ambitious as the Parishad's activities grew. STEPS proved to be more conservative and cautious than the parent organization in taking financial risks. Finally, in 1977, the Parishad on its own announced the pre-publication of a gift box of 10 children's books as its New Year present to school children. The first edition of 8000 sets were sold even before they reached the open market. A second edition had to be brought out in the same year. It revealed the latent demand for popular science books in Kerala. Since then publication has been a major activity and source for sustenance of the Parishad. During the last decade and a half KSSP would have published nearly six hundred titles, ranging from small booklets to substantial reference books. The total face value of the publications would run to more than 30 million rupees. By and large, more than 95% of the books are sold not through regular commercial book sellers, but through the activists of KSSP who take them from house to house and from school to school. So, all the distribution commission which would have normally gone to the distributors now became available to the organization, thanks to the efforts of the members. This has made KSSP not only an NGO but also a free and independent organization which does not require help from any funding agency and so can criticize the government or any other body when the situation warrants. This independence is essential for a genuine people's science movement.

Science Communication

Like many other science popularization organizations KSSP too started, essentially, as a communications group. The nature and tools of communication changed as years went by. The slogan "Science for Social Revolution" points to "action" and it is "directed action" (social revolution). There is a preconceived picture of the results of action. Elements of action are so designed to build up this picture. This requires detailing of elements. The picture of the future conceived, to begin with, by a few, has to be shared and sharpened by many. This is essentially a communication process. The communication efforts of KSSP can be classified according to their nature as (1) informative (2) ideative and (3) provocative. It has used a variety of media: such as books, posters, slides, models, lectures, songs, street theatre, folk arts.

Informative communication is intended to enrich the recipients with facts, with information. A large number of articles published in periodicals and a number of books were intended to be of this type. It does not attempt to give any value judgement. It does not resonate at the emotional plane. Thousands of astronomy classes held on the occasion of the visit of Halley's Comet, the lectures on Nature, Science and Society etc fall under this category. The grand "Cosmic voyage" including cosmic clubs and cosmic

festival, to welcome the total solar eclipse of 1995 (India will not witness a total solar eclipse for one century thence) too belong to this category.

Ideative Communication consciously tries to put into the mind of the recipient an idea, an outlook which either strengthens or changes an existing outlook. It will have a strong information content. Provocative Communication is intended to provoke people into action either against something or for something. Fields such as environment and health demanded more often than not provocative communication against abuse. Literacy, primary education, local area planning and so on demanded provocative communication for something. And KSSP together with other people's science movements did succeed in provoking people into action in a very large way – at least five million volunteers were mobilised to work as voluntary instructors in the mass campaigns for literacy.

Quite often communication exercises are held in the form of campaigns: lecture campaign, book campaign, polemics in newspapers and other periodicals and street theatre known as Kala Jatha. The last mentioned form, the Kala Jatha, evolved from 1977 through 1980 by KSSP, has been widely accepted all over India, as a campaign tool for literacy. There will be today, literally thousands and thousands of Kala (art) troupes spread all over India.

Education

The journals *Sastra Keralam* and *Eureka* proved to be the first bridges between the KSSP and the formal school system in Kerala. "...By itself nothing extraordinary happened. But occasionally one boy or girl browsing through it gets some doubt which they try to clear with their teacher. It was an unusual thing, a student asking doubts, that too from outside the text book. Most teachers brush them aside, but occasionally one teacher gets excited, and soon he finds his way to the KSSP..." In the summer of 1969 another popular programme "A Pretaste Course" for matriculation students who aspired to undertake university education was started. The aim was to give a pretaste to the students of the various courses offered in the colleges, nature and importance of various subjects and how these various disciplines are interconnected and related to our daily life.

With the help of sympathetic teachers the KSSP began to get more and more involved in the non-curricular activities in schools. The first major intervention was the campaign launched in 1973 to activise science clubs in schools. Within two years more than 1500 school science clubs were formed, all of them being affiliated to the KSSP. Success lay in locating motivated and committed school teachers in each of the schools and supplying the newly formed clubs an imaginative programme of activities. The Parishad brought out a number of popular science articles in *Eureka* and *Sastra Keralam* focusing on school level science activities.

Yet another important activity in the formal education sphere that was initiated in this period was the science talent tests. In 1972, Sastra Keralam Quiz was started for high school students. Two years later, the activists in Trichur took the initiative to organize a science talent test for primary school children with the help of the State Institute of Primary Education. The success of the experiment prompted the Eureka Science Talent

Test to be organised on a state-wide scale. The Sastra Keralam Quiz and Eureka Science Talent Test (Separately for Lower Primary and Upper Primary school children) proved to be extremely popular. Over these years it has grown into a state-wide science festival cum competition attracting nearly 400,000 children every year.

Thus, by the early seventies KSSP itself had become deeply involved in science education in schools, primarily because many of its activists came from among school teachers. During the same period, another major initiative in school science teaching came from the Hoshangabad Science Teaching Programme (HSTP) in the state of Madhya Pradesh. Out of this grew the famous Ekalavya Programme based on the discovery method. This was a fully fledged experiment within the formal system of education with the full concurrence and cooperation of the state government. To begin with it was tried out in a few schools in the Hoshangabad district and later expanded to all schools in 16 districts of the state. In contrast to this the KSSP had to carry out most of its educational activities, even curricular ones, outside the school. In the state of Kerala the education sector is highly commercialised on the one hand and trade unionised on the other. Both government and private managers were highly suspicious of "outsiders" going anywhere near education.

The KSSP was deeply conscious of the deteriorating standards of education in the state. The parents, the teachers, the students and the public, all were losing faith in each other. The Indian Education System with nearly 4 million teachers and 120 million students is a gigantic wheel with almost infinite inertia. Changes will be necessarily slow. The teacher is the key actor in this drama and the teaching – learning process the key element. The KSSP devised and carried out a variety of experiments, some on a small scale and others on a large scale. Over the past two decades it has been able to arrest the downsliding of education, to some extent; it has been able to demonstrate to the teachers and to the students that teaching – learning process could be enjoyable for both. It has been, also, able to bridge to some extent the gap between the teachers and the parents, especially the mothers. The pedagogic experiments conducted by the KSSP are:

i) Integrated Science Teaching
ii) Living with Science Camps
iii) Children's Science Festivals
iv) Teacher Exchange Programmes
v) Science Talent Festivals
vi) School Complexes
vii) School Science Clubs
viii) Children Exchange Programme
ix) Curriculum Development
x) Teacher Training

Besides such cooperative programmes the KSSP often had to come out vociferously exposing and opposing many government programmes which were in essence harmful to the interests of the people; had to organise people into militant action against rampant corruption in the field; had to mobilise the public for providing the minimum basic requirements for the schools etc. It had organised innumerable debates, symposia,

and seminars on various aspects of education. Today the public, the teaching community and the local self governments recognise the KSSP as an essential partner in their effort to better school education.

Currently, the KSSP, together with other people's science movements in India is initiating a major three-year-long programme called "JOY OF LEARNING". Its objective is to prepare a proper environment, and enough expertise for "Education For All 2000 A.D". The major defects of the present education system, especially school education, are lack of relevance and ineffective pedagogy. As a result, the teaching-learning process had, long since, become an ordeal both for teachers and students. The KSSP and several other organizations have been carrying out experiments to make education meaningful and enjoyable. It has evolved two slogans which can be translated into English not literally but figuratively, as: "learning is drinking honey" and "teaching is eating ice cream". The first target is teachers. We try to help them to enjoy teaching through a process of activity based, child centered, life related and environment oriented pedagogy. We emphasize on the organic interconnectedness of knowledge and its relevance in real life situations. Through a simple discussion on food we had generated the entire curriculum for science of class seven. Through a simple experiment to compare the efficiencies of ordinary age-old wood burning stoves and improved stoves we had been able to generate a year-long curriculum on heat, nutrition, agriculture, biology, dynamics and chemistry. However, the impact of all these activities on the system had been negligible. The system is huge. As mentioned earlier there are about four million teachers. The bulk of them are to be transformed. They need a considerable degree of deschooling. Massive experiments based on school complexes involving hundreds of schools and thousands of teachers are afoot in the state of Kerala and other states of India and the people's science movements are playing an important role in them.

Into Agitational Campaigns: 1977-1987

A distinctive feature of the third decade of the Parishad has been the spate of campaigns it has undertaken against the various instances of abuse of science and technology. Given the technological backwardness of our country, it was only natural that the initial focus of the movement had been on the need for quantitative expansion of science and technology and their incorporation into the productive process. Scientific outlook was an instrument in the struggle against semi-feudal culture. There was an excessively optimistic view of the social role of science in the present society. The Parishad had relatively ignored one aspect of the Indian reality: the development of capitalism. The incorporation of science and technology in the production process was not taking place in a vacuum but within the parameters of a profit oriented society. The choice made for the maximisation of private profit will rarely be the socially optimal ones. They need not even be the technically optimal ones. It came to be realized that the defense of the people against the adverse effects of application of science and technology in the service of capital is an important task of the People's Science Movement. The Parishad had taken up a number of such issue as misconceived development projects, environmental pollution by factories, occupational health hazards, drug abuse, militarisation of science and the danger of nuclear war, for agitational campaigns.

We shall attempt to give a cursory analysis of some of these campaigns. A more detailed analysis of these has been given by Dr. Thomas Isaac and Dr. B Ekbal in their monograph "Science for Social Revolution". The major areas of campaigns were:

i) Against Industrial pollution.
ii) Against deforestation.
iii) Against anti-people drug policies.
iv) Against abuse of drugs.
v) Against anti-people policies in education.
vi) Against corruption in education.
vii) Against irrational land and water management.
viii) Against consumerism and cheating of consumers.
ix) For a rational energy policy.
x) For a rational irrigation policy.
xi) For a rational agricultural policy.
xii) For a rational industrial policy.
xiii) For a people-oriented development policy.
xiv) For a people-oriented health policy.
xv) For decentralization and panchayathi raj.
xvi) For total literacy.
xvii) For universal achievement in elementary education.
xviii) For communal harmony.
xix) For self-reliant development.

Under each of these headings a number of distinct campaigns separated in space and time had been undertaken. More than one hundred pamphlets and several dozen reports or monographs had been prepared for this purpose. Not all these campaigns were successful. A few of them have even been counterproductive. But, the overall result is a highly conscious and pretty knowledgeable citizenry.

The most drawn-out struggle was that against the pollution caused by the Gwalior Pulps and Rayons factory at Mavoor, Kozhikode. It was a combination of people's struggles including direct action backed up by scientific research and technological studies as well as legal action. Ultimately the factory authorities were forced to install pollution abatement equipment. But the Birlas die hard. They behaved as first generation capitalists, ready to go to any extent to protect the last bit of profit. They retaliated by fermenting labour trouble, imposing a lock-out at the factory for three years and importing pulp from abroad. The factory was reopened under conditions most humiliating to the workers and to the state government.

A spate of similar struggles against a number of polluting industries followed. The one against Mothy Chemicals brought out another lesson. The factory was to produce electrolytic grade manganese dioxide. KSSP helped the local environment protection committee to draw up proper demands for pollution control. However, the initial tactlessness of the company authorities and the absolute callousness of a scientific team which accused the "environmentalists" infuriated the people to such an extent that the problem became political. The factory whose erection work was almost complete – 95% – had to be dismantled. In many places local vested interests – political or

financial – often blackmail entrepreneurs in the name of anti-pollution struggles. This is the negative consequences of heightened consciousness based on insufficient knowledge.

The Silent Valley debate was the most publicised environmental struggle waged by the KSSP. Isaac and Ekbal have given a detailed account of this in "Science for Social Resolution". Suffice to mention here that it led to several other debates on issues of development and ultimately transformed KSSP into what it is today – interested in every element of societal life.

New Situation 1987-1994

The year 1987 was another turning point in the history of KSSP as well as other people's science movements. The KSSP had been interacting with like-minded groups all over India from 1974 onwards. It had organized a large number of national workshops 1978 (Trivandrum), 1981 (Trichur) 1983 and and 1985 (Trivandrum). As mentioned earlier the KSSP had also been using the medium of folk art and street theatre for communication, as well as for organizing people, since 1980. In May 1985 it organized, collaborating with other groups in Tamil Nadu, Karnataka, Andhra Pradesh and Madhya Pradesh, an "All India Sastra Kala Jatha" in memory of the innocent victims of the Bhopal (Union Carbide) genocide of 1984. The jatha was a resounding success. Encouraged by it and supported by the National Council for Science and Technology Communication, Department of Science and Technology, Government of India, a much more ambitious national programme was planned in 1987 - the first Bharat Jan Vigyan Jatha. It gave birth to the truly pan-Indian People's Science Movement and led to the formation of the All India People's Science Network. And soon they were to embark on one of the greatest experiments in Indian history; eradication of illiteracy.

Edgar Snow asked Mao Zedong once, what he considered to be the greatest achievement of China's revolutionary regime. Mao is reported to have replied, after a minute's pause, "Yes, those flies, we have eradicated them". This is a very crisp way of saying a lot of things. Eradication of flies presupposes extremely good drainage, sanitation and environmental cleanliness. This is possible only in a society whose other more pressing needs are satisfied. Similarly, eradication of illiteracy means a lot more. It means universalization of elementary education (UEE) in enrolment, retention and achievement. It means removal, at least partially, of the causes that perpetuated illiteracy, that prevented UEE. It means a new sense of achievement for the people which will prompt them towards more achievements.

There were many in the political, educational and administrative hierarchies who believed that illiteracy eradication can succeed only in the wake of a major social upheaval, a social revolution. Hitherto world experience of successful literacy campaigns is derived from societies in the throes of social change – China or Cuba, Vietnam or Nicaragua, Burma or Tanzania. Very few people believed that an illiteracy eradication campaign can be successfully carried out in India today. Several reasons were put forward to prove this: that illiteracy cannot be eradicated without a social revolution taking place; that the task is so huge that it will never be possible to raise the human and material resources for achieving it; that without ensuring universal elementary

education it is futile to carry out literacy programmes; that it is meaningless to force universal elementary education when the bulk of our people feel that the present education is irrelevant to them; that it is impossible to generate the infinite social will required for this except under extraordinary circumstances like a freedom struggle or a revolution.

Clearly the argument was that one cannot and should not start with literacy, but with social change. People even went to the extent of arguing that illiterates are illiterate because they do not feel any necessity for being literate and that nobody has the right to "impose" literacy on them, even through friendly persuation! There are no text book or logical replies to such arguments. So the best way is to go to the people and ask them, ask in a way that will generate confidence and not cynicism. KSSP went to the people of the Ernakulam district of Kerala and they gave an unambiguous reply. More than a million and half illiterates came forward to learn and more than twenty thousand volunteers were ready to teach them. Ernakulam became the first fully literate district of the country. It also heralded a new movement.

KSSP raised the question: can a planned and massive movement for literacy precede a sociopolitical and economic upheaval? And further, even lead to one? There is no answer to this question either, in any text book. But the years 1989-1994 have shown that a mass movement for literacy is possible. Today there are nearly fifty million persons who have become or are becoming literate. And nearly five million volunteers are engaged in teaching them. Certainly, this is the greatest mass movement after independence. There is, further, enough proof to show that it is engendering sociopolitical upheavals of a sort. It was not accidental that the constitutional promise of free and compulsory education for all up to the age of fourteen was not fulfilled. There are vested interests to perpetuate illiteracy. They feel threatened with the spread of literacy. The movement has already shown the potential to develop beyond literacy. The sense of liberation and self confidence it imparts can go far beyond learning letters. It can liberate the poor and the neoliterate from cynicism and fatalism and instill in them a sense of optimism and faith in a better tomorrow and faith in themselves.

A totally new set of agenda has unfolded before the people's science movements, partly due to the emerging world situation and partly due to their increased capability to go beyond science popularization or literacy. Stated simplistically it is to empower the people to manage their own affairs democratically. But, they are no longer "weapon manufacturers". They have to become soldiers in the battle for social change. This battle is to be fought not in Delhi, but in the villages of India. The fight for democracy is also the fight against the minority which appropriates democracy for itself. This has to start from the villages and go up to Delhi.

This is no longer a pastime. It is real battle, with all its risks and dangers. Without a proper world outlook one would not get the courage and conviction necessary to take part in such a real life battle. We have made an attempt to develop such a world outlook, tentative though it may be.

World Situation Today

Human society is passing through a critical period. Never before has it had to face such rapid and such unpredictable changes. Humanity is being drawn into an unfathomable whirlpool generated by the relentless laws of capitalism. But it is unaware of the danger. This is most tragic. It is still not too late to avert the catastrophe, provided we recognize it and act accordingly. In the least number of words this whirpool can be defined as "all round mafiafication of human society". The rule of the jungle is returning – in a new form through the conscious abuse of "Knowledge". The sense of collectiveness and culture which differentiated man from animal is being massacred. The assassins range from sophisticated Multi National Corporations to the crudest of local thugs.

Make money, more money by hook or crook: this is the slogan prodding societies world over - not only in capitalist countries like the USA or developing countries like India but also in former socialist countries of Europe and Eurasia and even Socialist China. Its repercussions can be felt in all the spheres of life – economic, political, social and cultural. The aptest definition of any government is "an institution to legitimise mafia". Its consolidation is being considerably helped by the scientific and technological (S and T) revolutions of the second half of this century.

The S&T revolution has, also, led to the "globalization" of the economy of individual nations. The MNCs are able to effect global division of labour. Control over raw materials, capital, market and even labour is becoming more and more centralised. The corporations are stronger than any national government, even the USA. In fact they control the governments. The institutions like IMF, World Bank etc are, in fact, their instruments. The MNCs establish their hegemony over the world nations through their control over the market, through the appropriation of "knowledge" and through the application of military power. The socialist block which offered persistent resistance to the expansion of MNCs for three decades and more, does not exist now.

There is yet another consequence of the S&T revolution: the knitting together of world communities into an inflexible, hardwired megasystem. Any movement taking place in any corner of this system rapidly spreads through the entire system – the entire world. Even primitive tribes in far off lands experience this movement. More important: this system is showing positive feedback tendencies. We have a runaway system. Even small incidents quickly flare up to uncontrollable dimensions. Even the omnipotent mafia becomes powerless against such flare ups. In a situation where nuclear weapons capable of destroying all world life a number of times over are stocked in several countries the implication of such uncontrollable flare-ups is frightening.

Another disconcerting outcome of the S&T revolution and globalization is the exhorbitant power it gives to individuals. Heads of MNCs and their governments are unimaginably powerful. Wrong decisions by a few persons can play havoc. One kilogram of grey matter – the human brain – is today more powerful than all the nuclear explosive put together. This is potentially a dangerous situation.

A society whose motive force is private (corporate) profit is pregnant with the necessity of developing into a runaway system. Goods and services will have to be produced and exchanged at a continuously increasing rate. This is an unstable situation. Goods are required to satisfy human needs. Basic needs like food, clothing, shelter,

education, health, recreation and rest are limited. Even comforts of life demand only limited production. This level of production will not satisfy the increasing greed for private profit. Only by promoting useless and wasteful consumption, production and exchange of goods and services can profit increase without limit. The consequences of such an unlimited growth is what we see today – megafication of production and increasing concentration of economic power on the one hand and uncontrolled depletion of natural resources and disastrous ecological breakdowns on the other. Both these are grave threats to the continued existence of the human species and maybe even of life itself.

There are limits to the present type of growth. The percapita income of an American citizen is 60 times more than that of a Keralite. Yet if one compares the real indices of the physical qualities of life of the two peoples, the difference is only marginal-literacy 99 % and 95 %; life expectation 75-76 years, 71-72 years; death rate 6 and 7; infant mortality rate 10 and 20.

More than 90 % of the average American consumption is sheer waste. It is impossible for the six billion population of this globe to achieve the American level of wastage. That is neither necessary nor desirable. Unfortunately the developed nations do not accept this. Nor do those within the developing nations who enjoy undue privileges accept this. Presently the world is divided into two major blocks: a small number of highly developed, powerful and rich nations and a large number of poor and servile developing nations. Within these developing nations the society is divided into a majority which is continuously getting impoverished and a minority which at the expense of the majority gets continuously enriched. The haves of both the developed and developing nations have quite a different view of the situation. They accuse the havenots – who multiply like pigs, for the present impasse. They are unfit to live in this world! The slogan "eradication of poverty" gets converted into "eradication of the poor". The manifesto of the haves proclaim; "Ye, the haves of the world, do unite. You have a whole world to lose. Eradicate the have nots or else they will eradicate you".

Role of People's Science Movements

The PSMs had to respond to this world situation. In fact the KSSP has been sensitive to this emerging situation. The importance it is giving to empowering the people is based on this understanding. The past decade, especially the period 1987 to 1994, saw phenomenal growth in the spread of PSMs.

The havenots do not want "fair distribution of poverty". They want the satisfaction of basic needs and to be assured of minimum comforts. For this, production has to be increased several times. Very true! So, let us increase production first. The question of distribution can be taken up later. They are told. It only means "the poor produce, the rich consume". We cannot agree to this. Production has to increase without losing the grip on distribution. There are, however, limits to the increase in production. Definitely it cannot be the objective to "catch up" with USA and other "developed" countries. No, the objective is to see that there is enough production to satisfy the basic needs and comforts of every human being in this world. This cannot be achieved without curbing the wasteful consumption of the haves of today. Obviously they will not accept

such a proposition. They will tighten the wiring of the megasystem in their attempt to preserve their gains. S&T serve them as very useful weapons. Unless the havenots take control of the production, they will not be able to plan its components or its distribution. The problem of havenots taking back control had been on the agenda for the past century. The socialist revolutions were intended for this purpose. But one by one, all of them are losing the grip. The haves are taking back control again. KSSP had accepted the slogan of "Science for Social Revolution" 20 years ago. The social revolution envisioned was nothing short of the process of havenots taking control of the societal processes. The question is, how to do it without losing the control immediately thereafter. One has to learn from history, the history of socialism. First in Russia (Soviet Union) and later in many other countries the "havenots" took power in their hands. They began to build up new societies and new human beings in their countries. They nearly succeeded, but not fully. They were, in most cases, especially in the USSR, able to assure the basic needs and minimum comforts to every citizen, assure the necessary growth in production, assure the necessary stability in the society. For quite long everything was going fine, at least it seemed to be so. They were developing as models of paradise on this earth.

But, then, the entire system crumbled down. The ground rules on which they began earlier were all discarded. In USSR and the socialist countries of Eastern Europe the breakup was traumatic. Everything that was considered bad and detestable resurfaced. Why did this happen? What lessons are to be learned? There cannot be a single and simple answer to these questions. The process of breakdown was different in different countries. However, on closer examination one can discern two very important aspects which might have contributed to this breakdown. In all these countries the power of havenots took on a form called "dictatorship of the proletariat". This was to be a highly democratic setup, dictatorial against only the counter revolutionary forces, against the haves attempting a come back. But, in practice, in every country this became the dictatorship of the political party of the proletariat which soon degenerated into the dictatorship of its leadership. The democratic element, instead of getting continuously strengthened, was continuously weakened. The parties became more and more alienated from the people.

It is, however, ironic that the people of the former USSR and the East European countries have the illusion that societies based on market economy, the capitalist societies, have more democracy. In fact there is no democracy in the USA, UK, France or in India, Pakistan or anywhere else. What they have is sham democracy, proxy democracy – both in form and in essence. In the USA only about 50% of the citizens voted, and the victors get 50 % or less of votes. Only multimillionaires can aspire to become the President of USA. The same is the case in India – only a scaled down version. Economic concentration necessarily leads to political concentration. There cannot be any democracy in a society where the entire economic power is concentrated in the hands of a small minority. After all, what is the meaning of democracy if it is not people's control over their own lives? And where do we have it? True democracy has to be fully participative.

In all the socialist experiments hitherto attempted, only relations of production changed, but not the nature of the forces of production. The target of every socialist country was to "catch up" with and surpass the capitalist world. They wanted to produce the same commodities. They organized production on the same lines. They wired themselves into the same global market. The average citizen, in these countries too become more and more alienated both from the means of production as well as the process of production. Concentration of economic and political power without even the regulatory check of market competition must have, ultimately, led to its breakdown.

More research will have to be done to bring out the process of the break-up of the USSR and other socialist countries. But some questions have to be asked.

Can there be socialism without democracy?

Can there be democracy without creative participation of the people in the process of production and distribution?

Can there be creative participation in processes which are too big and global in character?

Can there be people's participation in the operations of transnational corporations? or even national corporations like, say National Thermal Power Corporation?

Can there be continuous development within an unstable positive feedback system?

The world experience so far prompts us to say: "No no". It becomes imperative to cut open a new path to socialism, a path of continuous strengthening of democracy. The long-term objective is not unlimited and exponential increase in the production of goods and services, but the mobilization of every citizen to creatively participate in the process of production to satisfy the basic minimum needs and comforts of all. To achieve this we shall avoid the process of mega-fication both in economic and political spheres. The natural alternative is the strengthening of smaller societies both politically and economically. One can say with and beyond Schumacher: The small has to become powerful because that is the only way one can face the large. The local economies have to become powerful enough to withstand the onslaughts of global economies.

The "economy of large-scale production" is often deceptive. It hides the indirect subsidies given by the state – by way of the infrastructure – at the expense of the citizens. The social cost of large-scale production is much larger than the entrepreneur's individual cost of production.

In a competitive global market if the small has to become powerful it has to be more efficient than the large in all the conventional indicators – energy, raw materials and labour requirement per unit output. However, even if this is satisfied, the larger ones can kill the smaller ones with the help of "market forces". The small cannot survive in a global market dominated by the large. One has to plan for a breaking up of the "global market". This is a counter-historic process, true, but it has to be done.

A movement to make small powerful, to make democracy real and participative, to rewire the world society into a negative feedback system, to break up economic and political concentration – this is the call of the day. And people's science movements have to respond to this call. Though not consciously the agenda of people's science movements have been evolving exactly in this direction. "Power to the people" has

been one of the central slogans of KSSP and many other groups. And this power is something taken by the people and not simply given to them.

This is the age of science and technology. Goods and services necessary for the society cannot be obtained in the old fashion. Only if people can wield science and technology, can they wield power. To empower the people with the weapon of science and technology – that was the conscious mandate PSMs have given to themselves. Their current intervention in the literacy campaign is based on the understanding that an illiterate people cannot wield science and technology or political power. Literacy is not enough. The PSMs are interested in the universalization of elementary education in its truest sense; that it is not only enrolment and retention but also achievement. PSMs are also interested in making higher education and technical education relevant to the society.

KSSP started Rural Science Fora with the specific objective of strengthening Panchayat (village) self governments. Though it could not succeed in the first instance the same concept is now being revived through the efforts of Panchayat Level Resource Mapping and Panchayat Development Societies.

The haves of the world, both of developed nations and of developing nations, will not take kindly to the concept of strengthening democracy. Only through fighting them, fighting them incessantly, can democracy be strenghened. It involves exposing and fighting against the antipeople policies of the governments, of the haves, fighting against use of science and technology against the interest of the havenots, fighting against the machinations of the developed nations to recolonise the developing nations, fighting against the treacherous elements within the developing nations. Today in India this is epitomised in the fight against the U.S trade imperialism expressed through their efforts to establish a new world order under its hegemony, a fight against the new policies of the government of India which will make the country utterly bankrupt, a fight against the threats from the fundamentalist, communal and fissiparious forces. It is a fight to protect the sovereignty of the people of India and other developing countries, a fight against the mafiafication of the country, a fight to protect human culture.

Observing keenly the development of science and technology Karl Marx wrote more than a century ago: mankind is on the threshold of liberty, freed from all animal limitations of the necessity to preserve and to procreate. Now onwards man can embark on truly human enterprises. But across the threshold one can see two paths – one of freedom and humanism and the other strife and criminalization. The people's science movements become relevant in as much as they contribute to guiding humanity to take the first path. This is a path wherein the society differentiates "demand" in the economic sense from "need" in the human sense, a path of continuous material progress to satisfy the needs of all. It is a new path, waiting to be cut open.

KERALA SASTRA SAHITYA PARISHAD*

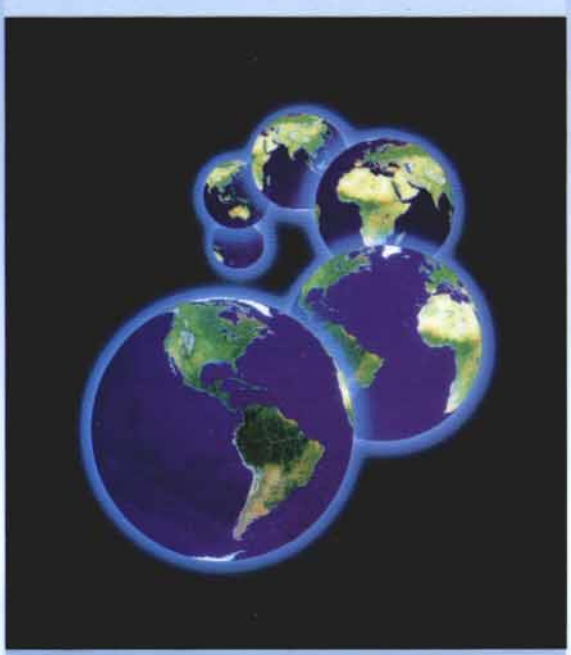
Vital Statistics

Status	A nongovernmental organization, registered as a society. Foundation 1962.
Jurisdiction	Kerala State
Membership	60,000 in 2,300 Units (Centres)
Members	Literally from every walk of life
Finance	Own generation through publication and sale of books – an annual sale of Rs. 4-5 million (150,000 dollars).
Annual budget	Rs. 1.5 million (50,000 dollars)
Publication	4 monthly periodicals with a total circulation of about 100,000, 30-40 books with a total face value of Rs. 4-5 million.
Structure	Unit, subregion, district and state level committees; sub-committees – annual general councils and elections
Special feature	No one holds on to a particular office for more than 2 Years.
Full time workers	3 + supporting staff (20)
Sponsored R & D work	Through an Integrated Rural Technology Centre supported by Government of India and Govt.of Kerala.
Major Divisions of work	Education, Environment, Health, Energy, Art, Literacy, Publication, Planning, Development, Issues of Women, Networking and Research.

(*) Sastra = Science; Sahitya = Literature

LES SCIENCES HORS D'OCCIDENT
AU XX^{E} SIÈCLE

SÉRIE SOUS LA DIRECTION
DE ROLAND WAAST



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