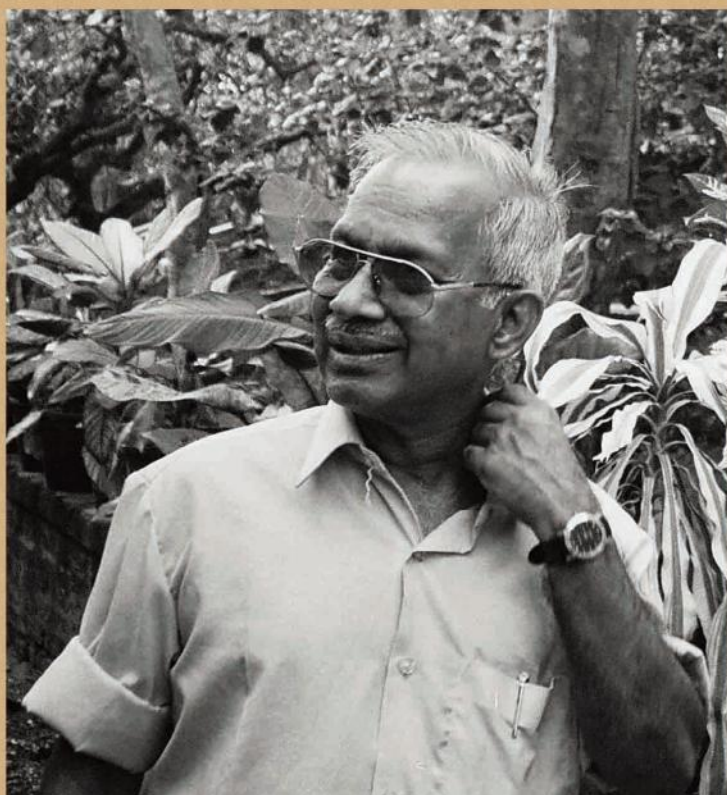


Dreams Without an Expiry Date:

MUSINGS OF A PEOPLE'S
SCIENCE ACTIVIST

MP PARAMESWARAN



DREAMS WITHOUT AN EXPIRY DATE

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Musings of a People's Science Activist

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The initiative of OUR GLOBAL U supports the proliferation of autonomous and self-managing local bodies and their interdependent networking for ecological and socio-economic sustainability. Our Global U constitutes itself as an experimental forum for alternative practices in the production, dissemination and use of knowledge, making possible different modes of relating to one another and to nature other than what is confined by prevailing dominating institutions and practices. Our Global U seeks to transcend the commodification of knowledge driven by capitalist mechanisms that shape possessive individualistic selves, and hopes to bring together old and new generations of committed people working for ecological justice and socio-economic justice to articulate knowledge produced by experiences in the field, common reflections, and in particular, the wisdoms of elders, women, and communities that defend their commons and rights. Our Global U hopes to help cross-fertilize initiatives practiced by organizations and networks to foster further inter-connections, experiment with creative and equitable forms of interacting, networking, and managing the commons. Our Global U envisions a new sustainable humanity on earth.

Contents

<i>Abbreviations</i>	vii
<i>Foreword</i>	xiii
<i>Introduction</i>	xix
1. Early Days	1
Turning the Clock Back	1
School Days	13
From Spinning Wheel to Tricolour Flag	18
2. High School and College	22
The Joy of Tinkering	24
Special Number Six	28
Engineering Student	30
I Am an Engineer	33
3. Bombay	35
The Atomic Energy Establishment	35
Sans Romance	37
In Pursuit of Happiness	39
4. Moscow	45
In Moscow At Last	45
A Memorable New Year's Eve	64
Culinary Excursions	72
Proletarian Culture	75
Development of Political Ideas	77
5. Back in India	81
A Long List	81
SSP(M), Bombay and FILSA	84
A SILK-en Net	93
I Join the Communist Party of India (Marxist)	96
Indian School of Social Sciences	98
The Jatha Bug	100

6. Back to the Barc	106
7. Good Bye, Bombay	111
Chintha Publishers	111
Why I Became a Communist	115
Emergency Is Declared	123
Nature, Science and Society	127
Peechi Camp	130
8. The KSSP Panorama	146
Engagement with Education	146
Science and Culture Jatha	148
Humans and the Environment	153
First Conference of People's Science Movements	155
Party Congress Delegate	160
May Day Academy	161
Chorus	164
Silent Valley Polemics	167
Research and Development	177
Integrated Rural Technology Centre	181
People's Plan Campaign	183
9. Ideas on Development	188
Environment for Development	188
Bharat Jan Vigyan Jatha	190
A Strange Phone Call	195
Ernakulam Total Literacy Campaign	200
10. Hectic Years in Delhi	204
Bharat Gyan Vigyan Jatha	204
We Move to Thrissur	211
BGVS Continued	213
Vinod Raina	219
11. In Search of an Ideology	222
Fourth World	222
CPI(M) Expels Me	228
Stranger Than Fiction	247
12. In Defence of an Ideology for a New Society	249
Elements of a Worldview	254

13. A Dream Village	269
The Objectives of the Village	270
Energy	273
Food Security	275
Industrial Products	280
Health	282
14. Dreams: The Elixir	284
<i>Appendix I</i>	287
<i>Appendix II</i>	301

Abbreviations

AIDWA:	All India Democratic Women's Association
AIKS:	All India Kisan Sabha
AIPSN:	All India People's Science Network
AIR:	All India Radio
ARENA:	Asian Regional Exchange for New Alternatives
BARC:	Bhabha Atomic Research Centre
BARCOA:	BARC Officers' Association
BGVJ:	Bharat Gyan Vigyan Jatha
BGVS:	Bharat Gyan Vigyan Samiti
BHEL:	Bharat Heavy Electricals Ltd
BJGVJ:	Bharat Jan Gyan Vigyan Jatha
BJP:	Bhartiya Janata Party
BJVJ:	Bharat Jan Vigyan Jatha
CC:	Central Committee
CDS:	Centre for Development Studies
CESS:	Centre for Earth Science Studies
CFTRI:	Central Food Technology Research Institute
CITU:	Centre of Indian Trade Unions
CPI(M):	Communist Party of India Marxist
CPSU-B:	Communist Party of the Soviet Union— Bolsheviks
CSIR:	Council of Scientific and Industrial Research
DAE:	Directorate of Adult Education
DENGO:	Developmental Non-Governmental Organization
DPI:	Director of Public Instruction

DSF:	Delhi Science Forum
DST:	Department of Science and Technology
DYFI:	Democratic Youth Federation of India
ERU:	Educational Resource Unit
ESI:	Employees' State Insurance
FILSA:	Federation of Indian Languages Science Associations
GATT:	General Agreement on Trade and Tariffs
GHGs:	Greenhouse Gases
GONGO:	Government Non-Governmental Organization
GOs:	Governmental Organisations
GUM:	Gosudarstvennii Universalnii Magazine
HSTP:	Hoshangabad Science Teaching Programme
IAS:	Indian Administrative Services
ICSU:	International Council of Scientific Unions
IISc.:	Indian Institute of Science
IIT:	Indian Institute of Technology
INCOSPAR:	Indian National Commission for Space Research
IPTA:	Indian People's Theatre Association
IRTC:	Integrated Rural Technology Centre
ISRO:	Indian Space Research Organisation
ISSS:	Indian School of Social Sciences
JNU:	Jawaharlal Nehru University
JoL:	Joy of Learning
KANFED:	Kerala Association for Non-Formal Education and Development
KFRI:	Kerala Forest Research Institute
KPAC:	Kerala People's Arts Club
KSEB:	Kerala State Electricity Board
KSSP:	Kerala Sastra Sahitya Parishad
MANAR:	Mass Action for National Regeneration

MEI:	Muskovskii Energi Theecheskii Institut (Moscow Power Institute)
MIDS:	Madras Institute of Development Studies
NAEP:	National Adult Education Programme
NBMS:	Nodal-Big-Medium-Small
NCERT:	National Council of Educational Research and Training
NCSTC:	National Council for Science and Technology Communication
NEP:	New Education Policy
NGO:	Non-Governmental Organization
NLM:	National Literacy Mission
PB:	Polit Bureau
PBVM:	Paschim Banga Vignan Manch
PDF:	People's Democratic Front
PDR:	Panchayat Development Report
PHCs:	Primary Health Centres
PPC:	People's Plan Campaign
PQL:	Physical Quality of Life
PRM:	Panchayat Resource Mapping
PSM:	People's Science Movement
R&D:	Research and Development
RSF:	Rural Science Forum
RSS:	Rashtriya Swayamsevak Sangh
SAC:	Satellite Application Centre
SFI:	Students' Federation of India
SILK:	State Institute of Languages, Kerala
SSLC:	Secondary school leaving certificate
SSPM:	Sasthra Sahithya Parishad Malayalam
SSS:	Saraswathi Sahaya Samghom
START:	School for Technicians and Artisans
STEPS:	Scientific Technical and Educational Cooperative Publishing Society

SVHP:	Silent Valley Hydroelectric Project
TIBA:	This is the best alternative
TIFR:	Tata Institute of Fundamental Research
TINA:	There is no alternative
TLC:	Total Literacy Campaign
TNSF:	Tamil Nadu Science Forum
UDCT:	University Department of Chemical Technology
UDF:	United Democratic Front
UGC:	University Grants Commission
VHP:	Vishwa Hindu Parishad
VSSC:	Vikram Sarabhai Space Centre
ZSS:	Zilla Saksharata Samitis

People

AKG:	A.K. Gopalan
Aniyan:	E.M. Sreedharan
Annan:	R. Radhakrishnan
BTR:	B.T. Ranadive
CG:	C.G. Santhakumar
CN:	C.N. Narayanan
CP:	C.P. Narayanan
EKN:	E.K. Narayanan
EMS:	E.M. Sankaran Namboodiripad
KK:	K.K. Krishnakumar
MNS:	M.N. Subramanian
NV:	N.V. Krishna Warriar
Pendamom:	P.N. Damodaran Pillai
PG:	P. Govinda Pillai
PKR:	P.K.R. Warriar
PS:	P. Sundarayya

PTB:	P.T. Bhaskara Panicker
SPN:	S. Prabhakaran Nair
SRP:	S. Ramachandran Pillai
VKD:	V.K. Damodaran
VKS:	V.K. Sasidharan

Foreword

By Lau Kin Chi

MP: Dreamer with a Childlike Innocence

“My name is MP, but I am not a Member of Parliament.” Then a shake of the head, Kerala style, and dimples smiling with radiance.

That was my first meeting with MP Parameswaran, in 1996. This image of him, with his forever-radiant smile and the head-shake, has stayed with me for the last 20 years. MP commands respect, not with his authority, but with his modesty and generosity.

Kind, hopeful, innovative, MP always stresses the three Hs—the heart, the head, the hands—in one’s commitment to social change. A pragmatic idealist, I would call him. A people’s scientist practically improving and managing the daily needs of villagers; a lyricist for kalajathas touring village after village; a philosopher dreaming for a society of justice and love. For such a communist in heart and in deed, committed to social change throughout his life, never aggressive, always naively genuine, I was surprised to learn that he had been attacked by the ideologues of the Communist Party of India (Marxist)—the CPI(M)—of which he was a member. When I paid him a visit at his home in Thrissur, he showed me a stack of newspapers with vehement attacks against him. It came up to my waist. But why? I was curious. “Maybe for my fourth world theory which the Party brands revisionist, maybe for intra-party factional

struggles against someone for whom I am scapegoat,” he told me then.

MP, for sure, never craves positions of power or lucrative returns. The charges sound absurd, but are not unfamiliar in the histories of communist parties. For example, the charge of “colluding with foreigners”. That could, I suppose, refer to the IADEA workshop in 1996, co-organized by the Asian Regional Exchange for Alternatives (ARENA), the Japan Committee for Negros Campaign (JCNC), the Kerala People’s Science Movement (KSSP), and the People’s Plan for the 21st Century - Rural Urban Alternatives (PP21 RUA); scholars and farmers from ten countries in Asia gathered in Kerala to exchange knowledge and wisdom. That could, I suppose, refer to joint publications that MP wrote with non-Indian nationals. That could also, I suppose, refer to MP’s visits to Chinese villages and exchanges with the Rural Reconstruction movements in China... It is a contradiction that the CPI(M), claiming Marxism to be its source, within which internationalism is a core concept, would cling to a myopic nationalism in attacking communists regarded as deviants. In 2004, MP was expelled by the CPI(M). Ironically, after his expulsion, MP was invited to play the role of the revered CPI(M) founder and leader, E.M.S. Namboodiripad, in a film, for he was regarded by the director as having a spirit and temperament comparable to that of E.M.S.

Thus, despite MP’s personal optimism and goodwill, his story is imbricated in the contradictions and tragedies of the times: the splits in the Communist Party of India following the Sino-Soviet row, and the dogmatism and opportunism of the CPI(M) in being dictated by electoral politics and developmentalist modernisation agenda. MP, being an original thinker in touch with the realities on the ground, sees for himself the need of villagers for small hydro dams, but not

the mega Silent Valley dam; for science to serve not the conglomerates for profits or the states for deadly weapons, but everyday livelihood needs; to improve the quality of life of the majority of the population, especially the most deprived and disadvantaged subaltern classes. No wonder his ideas come into conflict with the CPI(M). Once I asked MP, before the episode of the attack and expulsion, why he chose to remain a party member while he was so critical of its politics and policies. MP, with his dimpled grin, said, “It is like staying by the bedside of one’s dying parents.”

“I am a dreamer,” MP is always proud to announce. The title of his autobiography, *Dreams without an Expiry Date*, is so MP-style. His enthusiasm is contagious. I have visited Kerala and other parts of India over ten times, and frequently between 2000 and 2003, when I took scholars, practitioners and students from China and other Asian countries to learn from the KSSP, the People’s Plan Campaign (PPC), and the Society for Knowledge and Wisdom (BGVS), an education and literacy organisation extended from the All India People’s Science Network (AIPSN). I have met with MP in Thrissur, Palakkad, Trivandrum, Delhi, Mumbai, Pune, Gujarat... We were once reminded by MP’s close friend, KK Krishna Kumar, that MP has had a heart bypass surgery and the doctor warned that he should not talk for over three hours. It was a strenuous task to stop MP from continuing his dialogue with us. MP would be enthusiastic to show us inventions and achievements by the people’s science movement—smokeless stoves, charcoal maker, reinforced bamboo, home-made soap and toothpaste from coconut oil, fine hand-spun khadi cloth with 250 count yarns... He would update us on the debates and controversies in the KSSP and the PPC, and show us his writings and his book manuscript *Democracy by the People*. He would expound his thoughts on ecology, socialism and Gandhian Marxism.

Rest, work or leisure makes no difference to him. While he has never taken up any power position in the party or the state, he has been core leader in the KSSP and the BGVS with unremunerated roles of President or Secretary.

MP is a happy dreamer, living a rich life of simplicity, of giving, of playing a key role in the KSSP and the PPC, which I consider one of the greatest experiments in people's democracy in contemporary times: massive numbers of villagers and intellectuals directly engaged in the local, debating their needs, managing the commons, prioritizing education, health, livelihood and housing. This is a people's revolution—not measured in terms of 'success' or 'failure', which is the victor's language, but in terms of wave after wave of people's direct intervention in changing their lives.

MP lives his life with passion and conviction. I find in him a childlike innocence that I also find in a whole generation of activist thinkers—Samir Amin, Francois Houtart, Muto Ichiyo, Mushakoji Kinhide, Seiko Ohashi, Vinod Raina, Urvashi Butalia, Sam Moyo, Ebrima Sall, Surichai Wun'gaeo, Suthy Prasartset, Lee Jung Ok, Luis Lopezllera, Pedro Paez, Jorge Ishizawa, Jorge Santiago, Dai Jinhua, Wen Tiejun, Wang Hui, and so many others... They are my fond teachers and friends, sharing a passion for life and a dedication to changing the world and its people. Their childlike innocence is not lack of intellectual excellence, but quite the contrary; their childlike innocence is a temperament, a spirit of defiance, refusing to submit to the evil, the powerful, the impossible. It is the innocence of a child, as if unaware of the total destructive power of the invisibly prevalent enemies. It is, as a Chinese saying goes, the audacity of a newborn calf to dare confront a tiger. Such innocence and audacity arise out of an intellectual reckoning of the forces at work that subject the majority to

suffering, and an ardent compassion to endeavour to relieve this suffering. The heart, the head, the hands.

I have learnt a lot from these teacher-friends, and I wish that their stories and their thoughts be shared. Hence, a project was started in 2013 to tell the stories of activist-thinkers, weaving their lives and their times, their thoughts and their actions, to enable understanding of the moments that shape their character and their outlook, reflection on major choices they have made in their lives, learning about their activism and actions, making sense of contradictions and tensions, and articulation of visions for alternatives. The stories may be presented in the form of an autobiography, biography, dialogue, or interview. MP's story is the first in the series.

The project is not to create legendary heroes/heroines, but to present dreamers with childlike innocence daring the tiger. Through encounters with these personal stories of affect and thought, the readers may come up with an alternative reading of the histories of our times, nurture courage and hope for action, and be part, however modest, of the people's revolution.

Introduction

Why should anybody write an autobiography? Much of the self is intensely personal and cannot be shared with others. Since we are considered to be civilized, thoughts that often break the norms of civilization and soar towards freedom are usually characterized as barbaric or are said to lack culture. They will seldom find expression in an autobiography. We do a lot of self-censorship; there is no escape from it.

There is little difference between what one is *willing* to say about oneself and what a biographer can say. Why should anyone write a biography? It is a person's social life, and not personal life, that is depicted in a biography. A biographer or a publisher may think it useful for future generations to understand the work and contributions of a person that they believe has had an impact on society (which could be negative too, like that of Hitler).

However, the biographer often tries to look at society through their subject's eyes, a method that has severe limitations. Sometimes the biographer may fail to do even that. The person who wants to give a true picture of how they view society should write their own story. This is what provides me some justification for this endeavour. But I have to warn you that there will be a lot of 'I, me and myself' in it.

The biography is not only mine, but also of the People's Science Movement (PSM), especially the Kerala Sastra Sahitya Parishad (KSSP), as viewed by me. This means that the story has to start from 1962, a year that is of personal importance also to me. I went to Moscow for higher studies in 1962, which was also the year that the KSSP was established.

Early Days

Turning the Clock Back

I was born to Madangarli Parameswaran Namboodiri and Matampu Savithri on 18th January 1935, at my mother's ancestral home, a few kilometres away from Thrissur town. Madangarli is my surname and Namboodiri is my caste name.

When I turn the clock back, a few blurred images come into view: A two-year old sitting on an elephant. He is stark naked, just like other children in those times. The hair on the elephant's back prick his tender buttocks and he begins to cry. The child had earlier wept and begged to get on the elephant! This indelible image has stayed with me for the past seventy years.

This memory is of a forlorn village called Karinganadu in central Kerala. I lived there with my mother till I was three-and-a-half years old. My father was an Ayurvedic physician in Thrissur, managing his guru, E.T. Divakaran Moos's shop. His earnings were too little for him to bring his family to the town.

In those days, one was usually part of a joint family, which meant that a new bride had to invariably go and live in her husband's ancestral home. In my mother's case, this was not to be. My father was the third son of my grandfather. The custom among the Namboodiris was that the eldest son would marry within the caste, which was patrilineal, while the other sons would marry from matrilineal castes like Kshatriyas or Nairs.

This was to ensure that the number of members in one's own family did not increase exponentially. The Namboodiris were then few in number and even today, after two generations of 'opening up', that is, marrying outside the Namboodiri caste, their total number in Kerala could not be more than a lakh and a half, which makes them less than 0.5 per cent of the population.

Those were the heydays of the Namboodiri reform movement. Marrying within one's caste was considered a revolutionary act. Times were about to change and marriages outside the caste or religion—*mishra vivaah* or mixed marriage—were about to become the new symbols of revolution. Especially when the girl was married into a caste other than the Namboodiri caste. Even today, parents don't like their daughters marrying someone from a lower caste or 'below their caste'!

According to custom, my grandfather's second son married into the Zamorin royal family of Calicut, but my father and his younger brothers married within their own caste. Though my father's family was quite liberal, in the 1920s and 1930s, a younger son marrying within his own caste was considered an unpardonable offence. Hence, my father and his younger brothers were banished from the ancestral house.

One of my banished uncles had married the daughter of my father's guru and was working as a manager in a wealthy Namboodiri family. This was the well-known Moothiringode family, to which writer and social reformer Bhavatrathan Namboodiripad and his brother M.C. Namboodiripad, one of the founder members of the KSSP, belonged. They had given my uncle one of their farmhouses to stay, and it was there that my mother and I lived with my uncle and aunt.

My mother belonged to the Matampu family, and though my paternal ancestral home was closed to my parents because of the *parivedana* (younger son marrying within the caste),

my mother's home was not. We were always welcome in my mother's house and I loved going there. The famous writer Matampu Kunhikkuttan is my uncle's son. He had an older brother and three older sisters, who were all very affectionate towards me and I loved them too. They used to tell me stories and we used to play house. Cooking was one of our usual games too. Outside the homestead, there were a number of orchards with banana and mango. We used to enjoy plucking ripe bananas and collecting mangoes strewn on the ground, and eat them.

But all was not rosy. My grandfather and uncles were progressive, but not my granduncles. We were afraid of them, so whenever we went to *ammath* (amma's home), we would enter from the back gate to avoid coming face to face with them. The back gate led to the kitchen and *uralpura*, the paddy-pounding room.

Neelakantan was the worst of the granduncles, frighteningly orthodox and a terror. I had another reason to quarrel with him. He owned a dangerously big stud bull, to which cows were brought from nearby houses for insemination. The bull was given special food to eat, which included *nivedya*, cooked raw rice. Normally, we ate parboiled rice and raw rice was used to make *paayasam* or pudding. But I really relished *nivedya*, which led to a sort of competition between Neelandappan's bull and me. There were other reasons too for my dislike of the bull's owner. He would point out all sorts of silly things in the name of purity and make me take a dip in the pond several times to purify myself. His other brothers, Chitrabhanu, a Sanskrit scholar, and Subramanian were better than him and all the other uncles too. One uncle, who was older than my mother, was a bit deranged. It was he, however, who taught me to make *thakli*, a hand spindle, out of broken earthen pot pieces and spin cotton yarns using that *thakli*.

On this journey down memory lane, I can see a few more pictures. This time, the child is not in the frame. My mother is squatting in the middle of a medium-sized, multipurpose room that is next to the kitchen. The frame does not show her face, only her buttocks. There is a big abscess there, on which a leech has been put. After some time, the leech falls down satiated. Pus oozes out of the abscess like lava and falls on the floor and spreads.

Another frame: In the kitchen, there is a paved granite pit, approximately one metre square, called *kottathalam*. Next to it is the well from which we draw water. Beside the *kottathalam* is a big two-eared vessel for storing water. One morning, we see a gigantic snake in the water. In reality, it was only a small water snake. It is my memory playing tricks on me!

The clock now turns to August 1938. It was the time of the Onam festival. We had just shifted to Thrissur, where a new house had been built. My father's guru, who was also my uncle's father-in-law, had given my father and uncle around 45–50 cents (1821–2023 m²) of land each on a nominal rent with the permission to build on it. This is where the new house had been built and was to become my homestead. Later, after I graduated from engineering and became an earning member, the building was expanded several times. My youngest brothers, Krishnan and Vasudevan, share that house now. I have built a new one in the same compound. But, then, in 1938 it was a small house. My younger brother Sankaran was born around that time. He was about six months old when we shifted to Thrissur from Karinganad.

Of course, all this is hearsay or conjecture. But, in August 1938, the child comes back into the frame. He is being lifted up by his maternal uncle to the bunch of ripe bananas hanging from the roof. It is Onam. The child is trying to reach for the bunch, but his uncle won't let him. The moment the child

is about to grab the bunch his uncle pulls him down. I don't know whether the child cried or finally got the banana. The image has faded out.

Traditional Indian society was—and is to a large extent even today—a caste-ridden one. This caste system must have arisen from the conflicts and compromises between the invading, eastward moving Caucasian migrants from the Middle East and the indigenous Negritos and Austroloids. Those who were able to somehow get integrated with the Caucasians formed the upper echelons of society. They are called *savarna* (those with colour or a fair complexion) and *avarna* (those without colour or with a dark complexion) formed the lower levels of society. The *savarna* were the victorious group and the *avarna* the defeated one. From division of labour and class division (which was existent even during the Indus Valley Civilization), the transition to the four castes and the outcastes must have taken place in the period 1100–700 BC.

The upper castes were divided into four main castes—Brahmin (the priestly class), Kshatriya (the ruling class), Vaishya (the trading class) and Shudra (the menial class). All of them were part of the *savarna* community. Then there were the outcastes, the tribals, who over centuries got divided and subdivided into the scheduled castes (SCs), scheduled tribes (STs) and other backward communities (OBCs). Amongst the *savarnas*, the Brahmins occupied the topmost rung, with the ruling caste just below them, the trading caste below the ruling caste and the menial caste inhabiting the lowest rung. The outcastes were kept at a distance in a literal sense and were called untouchables.

As the caste system spread to the east, south and north of the country, the four castes acquired other names, like Sharma, Iyer, Iyengar and Bhatt. The Brahmins of Kerala came to be known as Namboothiris. Among them there were further

hierarchical divisions. The rich landlords added ‘pad’ to their name and became Namboodiripad. In Malayalam, they are called Aadhyan and the poorer folk are called Aasyan. They were also divided into prehistoric *gothra* or tribe names like Aangiras, Kashyapa, Vishwamithra and so on. The Namboodiris followed the patrilineal system and the rest of the *savarna* society followed the matrilineal system. The Namboodiris, since they were the priestly caste, never produced anything. Their wealth was given to them by others. In order to preserve this wealth from being fragmented, they invented an unusual marriage policy, which I mentioned earlier when talking about my parents’ marriage. All the sons of a family—except the oldest one—had to marry into the matrilineal castes. Their offspring had no right over their father’s estate. They only had claim to their mother’s estate and were brought up by their mother and uncles.

The Namboodiris considered themselves as the more superior Brahmins. They wouldn’t enter into marital alliances with other Brahmins of the north or south. They wouldn’t even eat with them.

This may seem strange, but the Namboodiris were an educationally backward community. The education that was compulsory for them was mastering the ability to recite the Vedas by heart and conducting pujas. The next stage in their education was Sanskrit: *Vyakarana* and *Tharka* (grammar and logic). A few of them would also take up professional education, like *Thantra*, *Jyotiha*, and Ayurveda. My father studied Sanskrit and Ayurveda. By this time, a new awakening amongst the Namboodiri community was already becoming visible.

Kuroor Unni Namboodiripad is considered the pioneer of the Namboodiri reform movement, which is more widely known as the Yogakshemam (literally community welfare) Movement. In the 1920s and 1930s, this movement started with the aim to modernize the Namboodiri community. A revival of

it in the present times is underway, but with a diametrically opposite objective, which is to restore to the community its orthodox form and content. Orthodoxy has a premium now—it is profitable. And radicalism goes at a discount. (*Pinnottu Nadakkunna Namboodirimaar* [Namboodiris Walking Backwards] is the title of a piece written by the well-known short story writer Ashtamoorthi.)

None of the educational options, except the study in Ayurveda, helped the Namboodiris to earn a livelihood. Education wasn't even necessary in the eighteenth and nineteenth centuries. But by the end of nineteenth century and the beginning of twentieth century, modern education, especially English education, was becoming increasingly important, while traditional sources of livelihood were shrinking. Every other community, the OBCs, the Nairs and the SCs were all in the thick of social reform movements. Radical youth among the Namboodiris too began their own social reform movement. The emphasis was on modern education on the one hand, and doing away with archaic practices as well as liberation of women on the other. The Namboodiri Vidyalayam was set up around this time and up to as late as 1948, the children studying there enjoyed free education, as the Namboodiris were classified as an educationally backward community.

The Namboodiri reform movement was more radical and thoroughgoing than other community movements, thanks to the intervention of stalwarts like E.M.S. Namboodiripad (EMS). I grew up in the midst of this movement. Though as a young boy I could not understand the inner strength of the movement, I was one of its beneficiaries. Not only men but also women came to the forefront of questioning orthodoxies. The women's resistance movement was particularly strong. They organized a work centre where girls who wanted to be free from the clutches of orthodoxy could break away from their homes,

stay in the centre and learn trades like tailoring in order to earn a livelihood for themselves. These girls wrote and performed a play to popularize their mission, which was entitled *To the Work Centre*. It was a powerful play, with a climax consisting of the wife breaking her sacred marriage thread (*mangalya sutra*) and throwing it at her husband to symbolize the declaration of divorce.

The reform movement was very strong and went far beyond social reform. The Namboodiris became intensely political, essentially moving towards communism from the 1940s to the 1960s, and gradually bringing the red flag into the khadi fold without abandoning khadi, the symbol of self-reliance.

One can say that among all the communities and castes in Kerala the Namboodiris are the most liberated. For instance, among other communities, a daughter's marriage is an economic catastrophe, especially for the poor, which leaves them bankrupt and in debt, but this is not so with the Namboodiris. The anti-dowry movement succeeded in erasing the concept of dowry from the minds of the Namboodiri youth and their parents. Further, there is a greater degree of tolerance of inter-caste and interreligious marriages among the Namboodiris. For example, in my (genetic) family, the daughters-in-law and sons-in-law are from various castes and religions, including Muslim and Christian, and are accepted as full-fledged family members. Acceptance of 'lower castes' and other religions by the Namboodiri families shows a great degree of social tolerance, which is absent in other communities and other parts of India. One could attribute this tolerance to the earlier intense battle against orthodoxy during the reform period.

I am fortunate because my parents, uncles and aunties were particularly open and tolerant. Ours was a highly cosmopolitan home, but then so are many other Namboodiri homes. However, in the past two or three decades one has witnessed a

return to the old orthodoxy—without its malice and violence—because of the failure of the left, which has forced many to go ‘back to tradition’.

General education in the earlier times consisted of rote learning of the Vedas, and students would be made to recite them in several ways. Those capable of flawless renditions were respected and were called *othan*, the one who can recite *othu* (which literally means what is said or the word) or the Vedas. My father was a well-known and respected *othan* and had mastered the jugglery of reciting. Besides, he also had a good voice.

My grandfather was not much of a ‘vedic’ juggler, but he had a good knowledge of treating ailments caused by poisons like snake bites, spider bites, scorpion stings and bee stings. However, he was not a professional. He was quite orthodox in his thinking and never wanted his children to be polluted by English school education. He also did not want his second and subsequent sons to marry within the Namboodiri community and increase the number of mouths to be fed from the little land he owned. When my father and his younger brothers got married within the caste, my grandfather got very angry and did not allow the brides to enter into his house. He was so agitated that he decided that his non-conforming sons would not perform his last rites. So he became a sanyasi and gave up all his worldly possession as well as his family. He got attached to one of the *maths*, a monastery established in accordance with Sankara Acharya’s tradition, and went there to spend the rest of his life. However, he could not continue that life for long because the *math* was poor and the food was not good. Since he was neither a devotee nor a scholar and was essentially a worldly man, he missed eating good food. So, he forgot his anger and went to stay with his eldest son at the ancestral home. However, he was not allowed to see his two wives and was asked to observe strict celibacy, which he did.

Occasionally he used to come to our home in Thrissur. My mother took care of the will of his palate, but being a woman, she was not supposed to appear before him. So, it was my duty to serve him food. Sanyasi—or *swamiyar*, as we used to say—is a man of god. Only after serving him are others allowed to eat. This used to often cause problems for me as my breakfast would get delayed and I would get late for school.

He died—or ascended to heaven, as is the customary way of referring to a sanyasi's death—when I was about thirteen years old. At that time he was staying at our ancestral home near Shornur. When he fell ill, my father and I used to go on weekends to look after him. One Sunday, when none of his other sons were around, he breathed his last in our arms.

The burial of *swamiyars* is unique. Their body is not burnt, instead it is placed inside a deep pit in a sitting position to indicate a meditative pose. Then the body is completely covered with salt and the pit is filled with mud. I was there to witness my grandfather's last rites.

My grandfather was quite an ordinary man, and I never had any particular respect for his traits. However, there were interesting myths floating around about the one-time greatness of the Madangarli family. One of my ancestors was quite famous as a divine personality. It was believed that when he uttered prayers in praise of Shiva in Vadakkumnathan Temple of Thrissur, Lord Shiva used to answer his call himself. But none of this divinity or greatness was passed on to our times. There is no record of my family history. Tracing relations is a major hobby of mine. When I, together with a cousin of mine, began to construct our family tree, we could only go back to our great-grandfather. All we know about his own father was that he had three wives and who was born to whom. Absolutely no record or narratives about my grandfather's grandfather or grandmother could be found, though we have

complete information about the subsequent generations. I was in a similar position when we tried to construct my family tree from my mother's side. Still, we were able to identify seven generations: 1,400 names from my maternal side and 1,300 from the paternal side. We were also able to identify more than 2,000 living relatives, of which 70 per cent are genetically linked and the rest are spouses with no genetic connection. They belong to different castes and religions and are scattered all over India and all over the world—in the USA, Europe, Africa and Australia.

My father's generation belonged to that of revolutionaries, though my father was more a dissident than a revolutionary. EMS and many other leaders of the Namboodiri social reform movement were his contemporaries and friends. The whole environment around the Namboodiris was of dissent and revolution, which had an influence on my father too. Communist leader Achuta Menon was our neighbour. I presume that my father voted for only the communists throughout his life. It was natural for this environment to have had an impact on the development of my own personality.

As I said earlier, my grandfather was not a rich man. The family had a more or less hand-to-mouth existence. When Partition happened, families got very little land, which wasn't even enough to provide food for more than three to four months. Other members of my grandfather's family were then forced to work to earn a living. My father became an Ayurvedic physician, his elder brother became a manager to a rice merchant, the younger brother got a job as a manager to a feudal family, one brother studied integrated medicine, one became a police constable (who later retired as the superintendent of police) and the youngest one got a job as a school teacher. Everyone was earning, so none of them had to go hungry. But, they still had to suffer many other deprivations. The next generation,

however, became well educated and were eventually quite well off.

The custom that allowed only the eldest son in a family to marry within the community led to widespread polygamy amongst the Namboodiris since it was the only way to provide a family for all the Namboodiri girls. To avoid unwedded girls from outnumbering wedded ones, one had to take several brides. My paternal grandfather had two wives and my maternal grandfather had five. There were abundant cases where an old Namboodiri married his daughter to a man who would marry the younger sister too. Many a young girl was forced to become the bride of a man who was of her father's age or older. Therefore, a lot of the married women were younger than their stepdaughters. Because of this several Namboodiri girls became widows in their childhood and remained so throughout their lives.

Two of my maternal uncles died within days of their wedding and my aunts lived as widows for more than six decades. To us children, they were very affectionate and loving and we loved them. But the tragedy of their lives was shocking.

The harsh truth is that men were culturally degenerate, who treated women worse than cattle. It was to revolt against these circumstances that a few youth from the community, Kuroor Unni Namboodiripad and others, who were already involved in the freedom struggle, initiated the Namboodiri reform movement during the early decades of the twentieth century. There were several symbolic actions in the revolt, like the cutting of the ritual tuft by men, who were supposed to keep their hair long, and women cutting their ears, which they traditionally used to elongate by hanging heavy ornaments, sewing them back together and wearing studs. Wearing blouses, sending girls to school, learning English, younger sons

choosing intra-caste marriages and widow remarriage, etc. were all an affront to orthodoxy.

School Days

In June 1940, when I was five-and-a-half years old, I was enrolled in the school nearest to our house, the Namboodiri Vidyalayam. It is strange but true that when we grow old, childhood memories come flooding back. I vividly remember my school days. I used to participate in this interesting game, which was like a competition for the children. There was a tree called *manchaati* in the school's premises whose tiny seeds were blood red in colour. The teacher would throw up a handful of its seeds in the air and let them fall on the lawn. The seeds would disappear instantly in the grass and we would have to pick them up. There would be hundreds of seeds everywhere and whoever collected the largest number won and got a prize. There were two ways of finding the seeds. One was the slow systematic way of scouring a given area very meticulously, while the other was running around in a rush to pick them up. Invariably, those who rushed to collect the seeds would fail and those who were more systematic and meticulous would win. In later years, I would often use this as an example in my philosophy classrooms.

The Namboodiri Vidyalayam was founded by the radicals within the community to be an instrument in the community's struggle. As a compromise with the orthodox sections of society, the school was founded exclusively for Namboodiri boys and girls; children of other castes were not allowed to enrol here. It was also agreed that boys could join the school after completing the initial ritual of mugging up Vedic texts. Socially, it was a quantum leap to also have girls in the school.

I was enrolled in class I, and many in my class were several years older than me. To help them along, there was a system of double promotion, where they could skip a class and move into the one above it. I too benefitted from this system and in the next year found myself in class III. Several images come to mind: I am being carried into the classroom by peon Raman Nair and I bite his ears; and I am being carried to school for my first examination when I have high fever. There are other flashes of memory too about my classmates, teachers and playmates, and of course other incidents and happenings. I particularly remember two older girls in my class. We studied together up to class IV and then they left the school. Later, when my cousin and I made our maternal family tree, I learned that they were related to me.

Parukkutty Amma was our crafts teacher. The only craft we were taught was sewing designs on a handkerchief. She was also our music teacher. Chandramathi was our teacher in class I, whom I met again much later when she was more than eighty years old. I remember many of my peers and seniors too by their characteristic features. Brahmadathan Namboodiri was three or four years senior to me, but very short just like me. He retired as a district judge. There was another Brahmadathan, who was stocky and strong. He would hold the pole used in the pole-vault event vertically, and the short Brahmadathan and I would climb it like it was an areca nut tree. When we would reach the top, the strong Brahmadathan would lift the pole up and carry us around like in a circus. I can still see the pole, the child that was I hanging on to it and the carrier, Brahmadathan.

The Namboodiri reform movement activists had an office at Round North in Thrissur. One day, I went there to see an exhibition of paintings. The scenes depicted the *Smartha Vichara* (trial) of a Namboodiri woman, Kuriyedath Thatrikkutty, who was at that time considered a revolutionary fighting for the

liberation of Namboodiri girls and the profligacy of Namboodiri men. She had slept with several elite Namboodiris and then got them all exposed and excommunicated from the community. She had kept meticulous records of all of them. Later I came to know how she had been abused by old Namboodiri men when she was a little girl and how as an adult she had made it a point to sleep with several of them, including her father and brother. Kuriyedath Thattrikkutty was a heroine for all of us. She still is.

Theatre was an important part of the Namboodiri reform movement. The youth of the movement used to perform many skits and plays, especially revolutionary plays written by V.T. Bhattathiripad, Bhavathrathan Namboodiripad, etc. The conscious use of theatre for social reforms got ingrained in me right from my childhood. This was perhaps what led me to the idea of organizing the Sasthra Kala Jatha in the KSSP. My own role had been then, and even now, behind the curtain. Only once was I in front of the camera when I had to play the role of EMS in Shaji N. Karun's film six decades later.

I can recollect hundreds of instances of my childhood. I wonder where they are stored in my brain and why they are so easily retrievable. But it seems this is the mystery of the human brain. Each one of my teachers in the Namboodiri Vidyalayam—Chandramathi, Parukkutty, K.K. Master, C.K. Master, N.M. Master, M.N. Master, Chidambara Iyer and Headmaster Ananthakrishna Iyer—are all still etched in my memory. In 1941, when I was already in class III, the class teacher, popularly known as K.K. Maash, was apparently quite a terror. He was very short-tempered, and when he got angry, his cane would get angrier, leaving painful red blotches on the erring pupil's palm. At least this is what we had heard about him. I was, however, fortunate not to have experienced his anger. Stories from class IV too used to reach us about the Sanskrit pundit. He was called C.K. Maash or Pundit Maash

and was rumoured to vent his anger by pinching the root of one's thumbnail with his own long and strong one. Stars wouldn't then sparkle 'up above the world so high', but eyes would sparkle with tears! Both became my relatives later. The short story writer Ashtamoorthi, who was the son of K.K. Master, married my elder cousin's daughter. C.K. Master became my godfather, in a manner of speaking. His daughter, Parvathi, was my classmate up to class VII and the naughtiest among the girls. The rest of the girls were much older than her. My friendship with her still continues.

In Malayalam era 1099 (1924–25), Kerala had witnessed one of the greatest floods in its history. The water of Bharatha Puzha or River Nila had reached up to the courtyard of our ancestral home, which was more than half a kilometre away from the riverbank. Such was the fury of the floods, which is still reverentially referred to as 'The Flood of '99'. In Malayalam era 1116 (June–July 1941), another severe storm broke out in Kerala. This one brought less intense rainfall but more severe winds.

I was only six years old during the second storm, but can still recall many images of it. One of them is of all of us sitting huddled in one corner of the main living room on the ground floor because the ceiling was leaking. This happened because the tiles on roof of the bedroom just above it had blown away and the bedroom floor was filled with rainwater. Of course, these details are not part of my memory; I only heard them much later.

The next day the storm subsided. Many trees in the neighbourhood had fallen, but there were no big trees in our compound. All the tiles had disappeared from the roof, only the rafters and reapers remained. I remember a cousin of my mother, who was living with us to assist father in the Ayurveda shop, on the rooftop placing the tiles that could be salvaged.

The phrase ‘The Storm of Malayalam Era 1116’ still rings in my ear. My parents remember ‘The Flood of ’99’.

In June 1942, when I was in class IV, one of my cousins who was more than four years older than me joined us. His father, my father’s eldest brother, did not allow him to join school till he had completed a few obligatory rituals essential for Namboodiri boys. The first one was called *upanayana*, which was an initiation into the study of the Vedas as well as *brahmacharya* or celibacy. The graduation ceremony was called *samaavarthana*, after which a boy was considered an adult and the parents started looking for a bride for him. In between the two stages, the boy had to observe a number of *vrithas*, rituals, and pay ceremonial homage to the god of fire in the mornings and evenings.

During these intervening years, which could go up to six years, the boy was supposed to study the Vedas—Rigveda or Yajurveda or Samaveda—by heart and also chant them in highly stylized rhythmic or musical ways. There were several taboos to keep in mind too. One shall not eat *pappad*, one shall not speak Malayalam during mealtimes, one shall cover one’s nakedness only with a small loin cloth and not wear trousers or shirts, one shall not eat anything which contains black gram, and so on it went. It was hard for a young boy of ten or twelve in those days. Everyone rebelled in secrecy and became hundred times more mischievous than monkeys, at least that is what one Sanskrit proverb says: ‘*brahmachari shatamarkada*’ (a celibate is more mischievous than a hundred monkeys).

My father was radical enough to save me from most of these ordeals. I did an internship of three years from age nine to twelve, where I had to carry out all the prescribed rituals and perform all the ceremonies, but I was not asked to cram the Vedas. I was second to none in breaking taboos, but secretly, of course. My father allowed me to go to school and wear shirts

and trousers. However, on coming back from school, I had to take a dip in the pond before I could have anything to eat. That too only food, no beverages; there was no coffee or tea to drink. My father's elder brother was not so liberal. He allowed my cousin to join school only when he was thirteen or fourteen years old.

The story was quite different for girls. Many of them were taken out of school once they reached puberty. Even the girl students were far older than me; some of them were my fourth or fifth cousins. There are many whom I vividly remember as they were then and I still keep in touch with some of them. All of us are now in our eighties and it is fun to reminisce about things that happened seven decades ago. One of my classmates used to be very active in the Namboodiri youth front because her father was an activist of the Yogakshemam Movement. I still remember the way she used to sing a particular poem about Namboodiri women taking a vow that they would not be confined to the kitchen all their life and would liberate themselves. I only remember these few lines, but she doesn't remember any now.

From Spinning Wheel to Tricolour Flag

The year 1942 was a great moment in the history of the Indian freedom struggle. The Quit India Movement was underway and spinning khadi was catching up as a major form of struggle against the British. The message of the movement came to our school in a very special way with a volunteer who appeared in our school to teach the children to spin khadi on a charkha. When I saw that my older cousin and many others joined the charka class, I certainly wanted to join it too. But I was refused admission on the grounds that I was only seven years old and

couldn't possibly handle a charka at such a young age. But I didn't give up.

There was a khadi store at Round West in the town. Besides khadi cloth, it sold raw cotton, cotton slivers, charka, carding bow and other accessories. It also had a few charkas on which any citizen could spin yarn. I went there and told the kind lady who was in charge of the store that I wanted to learn to spin on the charka. I think she was quite charmed by the little boy and readily agreed. She gave me cotton slivers and began teaching me how to spin.

I had a maternal uncle, an advocate, who had already become an important Congress leader in his area. He was the Congress candidate for the assembly elections in the Travancore-Cochin state and later in the Kerala state, though he never won, as the socialists were the voters' favourites then. He religiously adhered to khadi, always wore clothes made from the yarn he would spin himself and was a regular visitor to the store. When he saw me sitting there spinning yarn, I don't know what exactly prompted him—perhaps it was curiosity or sympathy—but he immediately purchased a charka and a pound of cotton sliver and gave it to me. Thus began my daily spinning routine at home.

Raw cotton was cheaper than cotton sliver, and so, I decided to make my own slivers. First, I made my own carding bow with a piece of gut I got from the khadi store. Later my uncle gave me a regular bow. With that I would card the raw cotton fibre, spread it on a board and roll it into slivers around a long pencil. I even grew cotton plants in our yard—not much, of course, but it was all very exciting. I learned to spin on the *thakli* too with the help of another uncle who taught me how to make a *thakli* at no cost at all. Gradually, my spinning skills improved. I could spin up to sixty count yarns, more or less uniformly, which could be transferred from the spindle to

the reel without breaking. My uncle would collect the reeled yarn from me, club it with his own and give them to the weaving unit. It was always white-grey, no colouring. My uncle brought me a piece of cloth woven out of our yarn. One would usually make both dhotis and shirts from the woven cloth, but I could not wear a dhoti because it had to be as small as a towel to fit me. So, I got a shirt stitched out of it. I felt on top of the world after wearing that shirt.

I did not have any inkling of the long-term political significance of khadi at that age. All I had was a vague feeling that it was an act related to the freedom struggle. It took roughly two more decades for me to understand the importance of self-reliance and self-sufficiency. That was when I was looking at the distorted development perspective of the Soviet Union in the early sixties. In the early years of the last century, I attempted to re-enact this idea on a mammoth scale as part of a still harder freedom struggle—the freedom from liberalism and consumerism. The dream kindled by my friend Professor Yash Pal was to erect two giant boundless khadi banners, running from Porbander in Gujarat to Teensukhia in Assam and from Kanyakumari in Tamil Nadu to Srinagar in Jammu & Kashmir. Ten thousand kilometres of two two-meter wide, thick khadi cloths, two million poles to mount them on, millions of artists and others to paint and write on them, tens of thousands of farmers growing cotton and two million casuarina trees especially for this, millions of freedom fighters spinning the yarn, tens of thousands of weavers weaving it, and tens of thousands of organizations involved in it. This is what the great dream for initiating a new local or swadeshi movement to fight global capitalism looked like.

But let me go back to class IV for now. That was the last year I studied Malayalam as a language. From next year onwards, I studied only English and Sanskrit. Interestingly, or

rather shamefully, despite studying Sanskrit for eight years, I never progressed beyond the basic literacy stage. In fact, this was the case with most of my classmates. The pedagogy of Sanskrit teaching was as bad then as it is today.

I was never more than an average student. My English was always weak. In those days, there was no electricity in our home. My cousin, who was living with us, and I used to study in the dim light of kerosene lamps. We had to appear for a common public examination in class VII. There was no single Kerala state then, instead there were three states in the geographical area which is now Kerala: Cochin, Travancore and the Malabar district of Madras province. The exam was conducted by the directorate of education, though I don't remember exactly what it was called. My father was apprehensive about how I would fare in the exam since I wasn't very studious by nature. He was hoping that I would at least pass. My cousin, on the other hand, was expected to get a first class. However, when the results of the exam came, it was the other way round.

High School and College

In 1946, I passed out from Namboodiri Vidyalayam after getting a first class in the seventh standard public examination. After that I joined CMS High School, which was for boys only. And so was St Thomas College, where I did my intermediate. In the first year of engineering, I was just above average in my studies. Though I found the studies interesting, college life itself was dull. In those days, the only engineering college in the state did not admit girls either. Going from adolescence to adulthood, extramural attractions are natural. I too had some one-sided attractions, which remain as pleasant memories even today.

In all the institutions I have studied, from primary to engineering, I was the youngest and the smallest boy in my class. When I look at the group photo of the 1949 batch of CMS High School, I am greeted by the strange sight of a barefoot diminutive boy in half-trousers. I graduated to full pants only after joining the engineering college. I was only eleven-and-a-half years old when I joined CMS High School and had to suffer considerable ragging because of my puny physique. Hardened in the art of withstanding verbal ragging at the traditional residential Veda school, where a number of Namboodiri boys met to enjoy the free lunch and dinner, it wasn't that easy to bait me. But there were other ways to make life difficult for me.

In those days, I did not have a folding cloth umbrella. Instead, I used to carry the traditional palm leaf umbrella to school, which gave other boys the opportunity to throw stones at it. Even Headmaster Charles, a strict Anglo-Indian who used to teach us English, prohibited the umbrella inside the classroom, so I had to leave it in the veranda. At that time, we had a very nice mathematics teacher called Joshua. He noticed my plight and started bringing a palm leaf umbrella to school too. His umbrella was bigger than mine, which he kept inside the classroom, and the headmaster couldn't do anything against him. Thus, my umbrella too found a place inside the classroom, and soon the boys lost interest. True, if all the boys had decided to bring palm leaf umbrellas to school, there definitely wouldn't have been any space left inside the classroom. I had to fight with my schoolmates on innumerable occasions. And because I was small and physically weak, I had to fight tooth and nail for everything.

My handwriting used to be extremely bad. Even now it is hard to read. I remember one incident that underscores the quality of my handwriting. I was in tenth class and Sankunni Menon was teaching English. One day, he wrote a note in my composition book and asked me to read it aloud. I don't remember the note verbatim, but it went something like this: 'Your Highness sets out to school in the morning with a bottle of ink, he pours it on the paper and spreads it with a mop. We, your humble teachers, are to read whatever you've written, if you have written anything, from the painting. Please do spare us this ordeal—Ever your humble teacher.' It was quite a humiliating incident for me, but despite my earnest efforts to improve my handwriting, it retains its pristine illegibility.

In those days, only a few Namboodiris were lucky to get modern education. Most parents opposed it and one had to

rebel to go to school. One could get free food at *Brahmaswam Madhom*, one of the three centres of learning instituted by Sankaracharya, but fees was still a problem and had to be paid in cash. The leaders of the Namboodiri reform movement had earlier succeeded in convincing the Maharaja of Cochin that some kind of financial support was necessary. Therefore, the Namboodiris were declared educationally backward and exempted from paying any tuition fees. I too enjoyed this concession till class IX, by which time the concession was taken away. I passed the Secondary School Leaving Certificate (SSLC) examination in March 1949 with a first class, but not with distinction. My cousin managed a second class.

The Joy of Tinkering

Science became my profession when I grew up. Even now, I profess science. Looking back, I see that I had always been driven by curiosity. I began conducting experiments when I was in high school. My first experiments were in Ayurveda. It was the most obvious choice since my father was an Ayurvedic physician. I used to often help my parents with the usual preparations of Ayurvedic oils, ghee and concoctions. While assisting my father in the shop to dispense medicines, I used to read his books. One interesting book, *Sahasrayoga*, a compendium of one thousand Ayurvedic formulations caught my fancy, and I started reading it. I found in it several formulations that ended with the following phrase: ‘...and good for strengthening the intellect.’ The idea to strengthen the intellect wasn’t a bad one, I thought.

I read the ten or twelve recipes carefully and found that certain herbs were common in all of them. I figured that

they were perhaps the active ingredients in strengthening brain power. Then I logically worked out a recipe by selecting certain ingredients from among them. Now I had to prepare the recipe and put it to the test. Just like clinical testing. But selecting ingredients was one thing, determining their proportion was another. I had no clue in what proportion to mix the ingredients. I finally decided to do so by guesswork. My father quite disapprovingly told me that this was no way to make a medicine and that the quantity of calamus (*vaacha*) roots I had taken was dangerously high. Arbitrarily, I reduced the quantity by half. The formulation was a *rasayana* which contained extracts of some herbs, powders of others, jaggery and ghee. Finally, I made about 700–800 grams of this concoction and called it *yukthirasayana*. Then I began to take a self-prescribed dosage. I wasn't really sure how to measure the increase in my brainpower, but within four days I began to feel it and became wiser. My brain told me to discontinue the medicine else I would be purged to death. My bowels had started overreacting. So, I heeded the advice of my 'strengthened' intellect and stopped taking the medicine. That was my first scientifically designed experiment, and I should say it was a success, for I would not have been here writing this book if my intellect had not become strong enough to listen to the rumblings deep down in my stomach and had not stopped me from taking the 'medicine'!

I did several other experiments. There is one plant called *neeroli* that is grown as a hedge, which I thought was short for *neervali*, which literally means the one that absorbs oedema. I decided to make a special paste out of its root along with leaf juice and buttermilk. Then I dried it in the shade and used it as a smear to remove oedema. I was hoping for a blotting paper effect, but nothing of the sort happened.

Another interesting experiment that I carried on for more than a year was the design and fabrication of various stoves that used sawdust or rice husk as fuel. There was a tinsmith named Muttickal Francis in Thrissur who used to make the stoves I had designed. They were mostly slight modifications of things that I had seen somewhere or the other. Years later, when I was guiding the project of the Department of Science and Technology on smokeless *chulhas*, I would remember these early experiments of mine.

Vegetable ink was another thing I tried. I would boil an extract of *Abhaya* (embilica) and mix it with ferrous sulphate or even plain iron filings, which would yield good quality black ink. This was age-old knowledge: *Abhaya* was used for colouring and was also a time-tested mordant for vegetable dyeing of cotton fibre. The other day, I was looking at my diary where I wrote: 'This note has been written using the ink I made.' That was more than sixty years ago.

Right from the beginning I used to help my mother in the kitchen, and there too I used to conduct experiments. Laughing at one of my preparations, my father told me: 'With a lot of sugar and ghee, you can even eat tasteless wool. The genius lies in making tasty food using cheap and readily available ingredients.' And that is what I have been trying all my life, much to the chagrin of my poor wife. I have experimented with soups, porridges, sweets, pickles, wines, curries, etc. The ones I like best are pickles—wild jute gongura, *avakka*, dried gooseberry, fried mango—all of them are commercially viable. So are wines from pineapple, rice, mango, honey, etc., apart from grapes. I enjoy these experiments even at this ripe age of eighty. Using the kitchen as the space, I later developed the concept of 'Kitchen: A University in Your Own Home'.

My father had a general understanding of cows and their characteristics. So, he pursued it as a serious hobby by helping

friends and relatives select and buy cows. The price of a cow primarily depends on the amount of milk it yields as well as on its age, health and other characteristics (*lakshana*). The procedure was that my father would ask the seller to keep the cow in our home for three or four days, where we would feed the cow normal food. No extra black gram or banana was fed to the cow, which could lead to a temporary increase in the yield of milk (these days they inject hormones to do this). After the assessment of stable yield, the price would be fixed on a per *naazhi* basis, which was roughly equivalent to 300 ml; these days it is done on a per litre basis. In my childhood days, the price of a cow used to be around Rs. 80 to 100 per litre. Now it is around Rs. 4,500 to 5,000, which is almost fifty times more. Those days, rice was sold for 40 paise for one kilogramme and sugar for 60 paise.

We had a fairly big cowshed that was capable of holding four cows. We mostly had two or three cows there at a time. Usually my mother would milk them and if for some reason she was indisposed, then I did the chore. I was never very good at that vocation, and by the time I would finish milking the cows, my thumbs would start aching.

There was another duty that was mostly assigned to me, which was purchasing fresh grass for the cows from the market at the railway overpass, where currently a Mariyamman Kovil (a primitive goddess' shrine) stands. The makeshift market would always be set up from 4 p.m. to 5 p.m. daily. *Cherumi* (scheduled caste) girls and women would gather there to sell their whole day's cut of grass, and I had to bargain with them. At first, I would offer a ridiculously low price, which would make them angry and hurl abuses at me, the meanings of which I was blissfully unaware of then. They knew all sorts of tricks that they used to cheat me like rebinding the grass loosely to seemingly increase its volume. Every purchase was an ordeal for

a boy of nine, bargaining with those *cherumi* women and not knowing what to do faced with an onslaught of their profuse and colourful vocabulary. But they did nothing to mar the affinity that I developed during those years towards cows and dairy, which lingers till today.

I still carry my childhood passion for agriculture too. On the south side of our home lay an acre of a single-crop paddy field belonging to my father's guru, which had not been rented out to any tenant farmer. It was normally kept fallow and in summer we were free to grow vegetables there. My father would cultivate cucumber, melon, bitter gourd, snake gourd, etc., and my younger brother and I helped him. Each of us also had a 'personal' piece of plot of a few square metres for our own cultivation. Our yields used to be very small and we were not good farmers, but it used to be great fun. Though my argument that agriculture and animal husbandry should be brought back as major income-generating occupations did not directly emanate from this experience, but from intellectual conviction.

Special Number Six

The three years of high school went by quickly and it was now time for me to get into the university. There was, however, one problem: I was too young to get admission in the university. In those days, intermediate was part of university education and Madras University, to which colleges in the erstwhile Cochin state were affiliated, was very strict. Those who were not fourteen years old by 15th January 1949 were not eligible to be admitted in the university that year. I was three days short of that cut-off date as I was going to turn fourteen only on 18th January. No exceptions were allowed. So, there were only two

choices before me: I could either sit idle at home for one year or join a diploma course for which this age restriction would not apply. My father and I decided against my being idle for a year and to seek admission to the Maharaja's Technical Institute in Thrissur.

The principal was a nice person. He told my father that admitting me in his institute would be a mistake and we would regret my not doing a degree course. He advised my father to let me join the college as a non-enrolled student and to not consider that one year as wasted. My father heeded the principal's advice and put me in St Thomas College as a non-enrolled student. There were six other students there like me. I was special number six. We paid the fees, attended classes and wrote examinations but were not promoted to the second year.

Thus, I studied the first year of intermediate twice without failing. That may not be completely true. I did fail in English, which continued to be my weak point all throughout my student years. It was with great difficulty that I managed to score 40 per cent in the inter-final examination. If I had scored 6 per cent less than that, I would have failed, even if I had scored 94 per cent in maths and more than 80 per cent in physics and chemistry.

In St Thomas College too I was the youngest student in intermediate. The senior students teased me: 'Sonny, have you brought your mom with you? Where is your feeding bottle?' If I was not underage or if I had been allowed to join intermediate straight after high school, I doubt I would have cleared the first year in my first attempt. I would have definitely not got such high marks. In those days, 384 marks out of 450 for maths, physics and chemistry was quite good. They were enough to earn me admission into an engineering college.

In the last months of intermediate, like my classmates, I too was thinking about higher education. Studying engineering

seemed far-fetched. I would have to go to Trivandrum and stay in a hostel, which, along with the tuition fees, would come to several thousand rupees. This was clearly too much for an Ayurvedic physician who hardly managed to earn a hundred rupees a month and had nine mouths to feed. I sounded out my maternal uncles on this, who were comparatively better off, but got no encouragement. The other option for me was to join an honours course, which would be equivalent to Master of Science. I thought that I was deeply interested in chemistry, though Professor Kunjan Raja, who taught chemistry at Maharaja's College, Ernakulam, and was a friend of my father, reminded me that chemistry was not all gold and glitter. Anyway, I put in an application for engineering in Trivandrum and then joined the chemistry honours course in Maharaja's College.

Engineering Student

After two months, my father received the card informing of my admittance into the College of Engineering, Trivandrum. This put him in a dilemma. I don't know what calculations he made, but he went and saw a rich feudal friend who promised to give him a loan of Rs. 2,000 against a mortgage on the house. Another well-wisher agreed to give a recommendation letter to me for the head of a *math* where I didn't have to pay for food and stay. With these promises under his belt, my father put me into the engineering college. I knew the risk he had taken and was conscious of the gravity of my responsibilities. I was diligent in my studies and extremely spartan in my living. Yet, my father had to sell a small piece of land of 20 cents (809 m²) in the town to complete my education. Looking at the bright

side, I did manage to complete the four years of engineering education within a total budget of Rs. 3,200.

My uncle, Matampu Narayanan Namboodiri, who had bought me a charkha and initiated me into khadi, had studied law in Trivandrum. He had many friends there, especially from the Kilimanur and Mavelikkara royal families. During my first year in engineering, he came to Trivandrum and introduced me to his friends. Artist Ravi Varma, nephew of the great artist Raja Ravi Varma, lived in a big house that was a few minutes walk from where I lived. I used to visit him often throughout my engineering years.

In 1954, I met Ambalappuzha Venketeswara Sharma, a great Sanskrit scholar and an avid student, even at the age of around eighty years, who was trying to prove a point in Indian history using geographical maps. I wasn't impressed by his argument much, but his sense of enquiry and zeal to learn was quite admirable. I had met another gentleman of a similar age, who belonged to Pannisseri Illom, which was close to the house of the great Malayalam poet Kunchan Nambiar. This person was a great Sanskrit and astronomy scholar. His main hobby as a young man was to carry on lawsuits in Madras High Court. He used to stay with college students of his own age in Madras, who later became leaders of the Namboodiri reform movement. They used to rag him for his lack of knowledge of English, and so, he started learning the language on his own. Later he became quite fluent in English. When I was introduced to him in 1954, I thought that he and Venkateswara Sharma would enjoy each other's company very much. I told Sharma about him and also gave him directions to his house. I was surprised to learn later that Sharma actually went and spent nearly a week with him, which, in the words of the scholar Pannisseri's son, was the most pleasant time his father had had in his last days. I couldn't meet him again as he died soon after that.

My uncle also took me to meet the family of the late Dr Goda Varma, a famous Malayalam scholar. His daughter Rugmini and son Vijayan later became my close friends. My uncle also took me to Professor Damodaran Nambeesan, a former professor of history. His ancestral home was close to my mother's home and we became family friends. He was also my local guardian in Trivandrum. He was the one who initiated me into popular astronomy, talked to me about Halley's Comet and planned to see its return in 1985 with me. Unfortunately that was not to be, as he died a year before the comet came. Even during my engineering college days, I was able to amass a wealth of friends, the greatest of all kinds of wealth. Even today, I am extremely rich in that way.

During my first summer vacation in college, I had the fortune to spend some time with a very brilliant self-taught electronic engineer, M.N. Namboodiripad, the elder brother of M.C. Namboodiripad. He got me interested in electrical engineering. He gave me a copy of the *Admiralty Handbook on Electrical Engineering*, from which I learned the first principles of electrical engineering. During the second year, Dr Keshava Rao, who was an unorthodox teacher, decided to handle the subject of alternate current engineering for the second-year students. He normally taught only the third and fourth years, and so the students in my class did not appreciate him much. His method of teaching was similar to the one mentioned in the book that M.N. Namboodiripad had given me, so I managed to do well. In the half-yearly examination, I got thirty-five out of fifty marks, a couple of other students got around twenty and the majority got less than ten marks. This made me a celebrity, which meant that there was pressure on me to keep it up. I did manage to score better marks in the second-year examination. After the second year, we were asked to choose our specialities,

and I opted for electrical engineering. I also topped the list in the third- and fourth-year examinations.

I Am an Engineer

In 1956, I graduated as an electrical engineer, standing first in the university. Even before the results were published, I was selected as a trainee by the Indian Aluminium Company. I joined the company in the morning but left it in the evening because they refused to commit to a post-training appointment. Within a month, I was given provisional appointment in the electricity department of the Travencore-Cochin state as a junior engineer. I was technical assistant to the executive engineer, O.C. Cherian. The university results had still not been published by then.

The Second Five-Year Plan proposals were being drawn up. My job was to collate all the load forecasts that were coming from divisional offices and remind those who had not send them. My provisional appointment was confirmed by the Public Service Commission in July. Because of the exigencies of communal rotation, the first rank in the seniority list was given to a Muslim classmate of mine, and I was put in second. In those days, these things mattered a lot. Superintendent Engineer U.C. Nair, who was quite *savarna* conscious, advised me to leave government service and look for my fortunes elsewhere because of discrimination against the higher castes. I had already decided to leave Kerala even before he said this.

My first regular company appointment came from Associated Electrical Industries in Calcutta. At the same time, I also got an offer to join Tata Hydro in Bombay as a trainee. Because my uncle and many cousins were already in Bombay,

I chose to go with the latter option. I was with Tata Hydro for only ten months, but during that time I learned more about electrical engineering in their hydro and thermal stations and in the load dispatch and transmission divisions than I had in all my four years in college.

In early 1957, while still working with Tata Hydro, my friend and classmate T. Gopinathan (son of Desamangalam Aniyam Namboodiripad) and I together started learning the German language. Our teacher was a very young and beautiful German lady called Mrs Gupta, and the tuition fee was Rs. 8 an hour per head, which had to be paid each time after class. We were only too glad to pay this amount because more than learning German, it was her company that we enjoyed. When the monsoon started, it became difficult to travel to her Napean Sea Road residence and we stopped going to the classes. I don't remember her face anymore, but I can still recollect the pleasant feelings she evoked in me.

Bombay

The Atomic Energy Establishment

In August 1957, I joined the first batch of the Atomic Energy Establishment Training School in Bombay. Dr Raja Ramanna taught us nuclear physics and Professor B.M. Udgaonkar taught us reactor physics. Two things that Dr Ramanna said still remain fresh in my memory: ‘One has to design new instruments to make new discoveries’ and ‘one cannot be a ten-to-five scientist, one has to be a twenty-four-hour scientist.’ Dr Ramanna was always in a hurry and we in the first batch of the training school used to joke about it: ‘Don’t disturb him. He is busy working for his Nobel Prize.’ He had been handpicked by Dr Bhabha because not only was he a really bright physicist, but he also played the piano well, and Dr Bhabha was a serious connoisseur of the piano.

Despite the simple food and the bare barracks, the hostel at Lands End in Bandra was a beautiful place. The rocky beaches were a splendid location to spend evenings, looking at the setting sun and dreaming the wildest dreams. But one evening, on 4th October 1957, a reality hit us that overshadowed even the wildest of our dreams. I was relaxing on the rocks with my friend M.R. Kurup, who was my roommate in the hostel, when somebody brought us the news that the Soviet Union had launched its first artificial satellite to earth. It was called Sputnik and it weighed eighty-two kilogrammes.

This was stunning news. The satellite was more than twice as heavy as the one the USA was planning to launch sometime in March next year. That day the USSR overtook the USA in space and then maintained this lead for decades to come. Not only in this, but also in the peaceful application of atomic energy, in nuclear power generation, the USSR managed to surpass the West. Their small atomic power station in Dubna near Moscow had been working since 1955. The first UK power station at Calder Hall went critical only in 1956 and the first US power station at Dresden in 1962. The Tarapore Power Station in India, which became operative in 1969 was identical to it. But, on that memorable day on 4th October, on the beautiful sunny beaches of Bandra, Kurup and I decided that we would learn the Russian language.

Together we went the next day to the Indo-Soviet Cultural Society in the Fort area to enquire about Russian language classes. We were pleasantly surprised to learn that a fresh course was to start in November and we quickly enrolled ourselves for it. To begin with, there were about forty students. Mr Dongerekare, an activist of ISCUS, was teaching us when we first started. Then within a few months he was replaced by Ruzhena Kamath, a woman from Czechoslovakia, who was also the wife of Professor N.R. Kamath from the Indian Institute of Technology. Classes were held in the University Department of Chemical Technology (UDCT) at Matunga.

Soon students began to drop out. By the end of the year, only three of us remained: Kurup and I, and Mr Koppikar from the chemistry division of the Bhabha Atomic Research Centre (BARC). Mrs Kamath suggested that since there were so few of us, the classes could be taught in her home at Sion. So, we continued learning Russian in her house for another year. I had become quite proficient in reading and understanding the language, but not speaking or writing it. Early in 1960, I

got a copy of a newly published book on the nuclear reactor theory by Dr Galanin. It was in Russian and was a much better textbook than any available in English. Both for fun and as a practice exercise, I set out to translate that 400-page book into English. I completed the translation in six months, but there was nobody to publish it. The first English translation of the book was published four years later and was extremely costly then.

In 1960, I applied for a scholarship to study in the USSR. But the Department of Atomic Energy did not forward my application. I wrote a rather long letter to Dr Bhabha explaining why I should be allowed to go for higher studies to the USSR, how I had learned Russian and how the department would benefit from this. He returned my application with the following note: 'This young man should be sent at the next opportunity.' That opportunity came without much delay in 1961, and this time the government reserved three seats for the Department of Atomic Energy. The other person to apply along with me was Mr Srikantan. I opted for the atomic power stations department while Srikantan chose the electronics department. His application was rejected, but I was selected.

Sans Romance

By this time, I was married. A cousin of mine got married in 1958 and his brother-in-law, who was known to us from before, asked my father for my younger sister's hand in marriage. She was only eighteen and was studying for intermediate. But in those days it was very difficult for a father to say no to a marriage proposal for his daughter. He wrote to me about it and I in turn wrote to my sister. She was not particularly anxious to continue her studies, and so, the marriage was fixed.

As it was an accepted practice then, my sister was to be given Rs. 5,000 as dowry, but my father couldn't raise such a huge amount. However, my future brother-in-law was ready to defer it till I got married so that the dowry my wife brought with her could be passed on to them. My sister's wedding took place in 1958. My father had now become a debtor and the pressure was on me to get married. There was no occasion for me to fall madly in love with anybody, though I had the usual teenage fascinations. So, I was open to marrying a person I had never met. My father sent me three photos of prospective brides with their educational qualifications. I randomly selected one of them, but my father suggested one of the other two. She was the niece of someone we knew very well in Thrissur and was more beautiful than my first choice, so I readily agreed. Once in 1960, when I was back in Thrissur on vacation, the girl's uncle and father came to meet me at home. To have an engineer as a son-in-law who had the prospect of being quite successful in his career was attractive, even though the family was poor.

I didn't know what sort of a husband Bhavani, my future bride, wanted and if I fit the bill. I talked to her uncle and offered to meet her somewhere so that she could assess me, but her family was a bit worried. What if *I* said no? We saw each other for the first time only after the wedding ceremony, on 31st October 1960. My mother had reported to me earlier that Bhavani was eight centimetres taller than me, but I did not mind. One person will have to be taller than the other. Why should it invariably be the husband? That was my logic. Later I came to know that my wife did not share my sentiment. She definitely wanted her husband to be taller than her. Nobody had told her that I was shorter before we got married. In fact, she didn't even know that her marriage had been fixed till the very last moment.

Bhavani had failed her SSLC examination four years ago and had decided to not sit for it again. During those days, Namboodiri girls in her village did not have many academic aspirations. Bhavani belonged to a relatively well-to-do family, was the oldest daughter and her father was extremely fond of her. All her girlhood aspirations had been satisfied by her father, who used to take her with him on his sojourns. So, she got to see some of the outside world, which most of her friends and relatives of her age had no opportunity to do. She read pulp novels and lived in a semi-imaginary world. Marrying me came as a rude shock to her because reality was quite different from her imaginary world. The cruellest of the shocks was my height. Even after fifty-four years of married life, the scar left by that shock is almost as fresh in her mind as it was on the day of our wedding.

In Pursuit of Happiness

And what about me? What did I want? My friends and colleagues in Bombay were surprised that I could marry someone I hadn't even met once. But I think I had already matured enough to realise that nobody could marry the most beautiful woman or the most educated woman in the world. They did not exist. Lovers see only the most likeable aspects of each other during courtship and are blind to certain others that are not so pleasing and are bound to shock them after marriage. There could be a thousand and one issues in everyday life on which they could differ with each other. Marriage and a stable family life would require extreme understanding and tolerance from both partners. Without these, no amount of premarital acquaintance and love would help.

I had my own yardstick of beauty, which was mostly imbibed from Sanskrit education, from the descriptions of goddess Parvathi and heroines like Sakunthala and Damayanthi. I believed that such beauties, though rare, did exist in real life. However, I was not aspiring to get any one of them as my wife. How could I ever be good enough for them? A pleasant-looking girl, that was all I wanted, and Bhavani was definitely that. As far as the thousand and one differences that could emerge, they had to be countered by mutual tolerance. Of course, that didn't mean I never got angry or we never argued. We did have disagreements then and we still have them now.

I am an infinite optimist, and I convinced myself intellectually that whatever will be, will be. There is a saying in Hindi: '*ye mat poocho kal kya hoga, jo bhi hoga achha hoga*' (don't ask what tomorrow holds, whatever happens will be for the best). I realised that happiness is an attitude and that I should strive to be happy under all circumstances.

Once a television interviewer asked me, 'Sir, what is your message to the youth?' I was a bit annoyed with the question because its underlying meaning was that I had become old and would soon fade out. Was giving advice my only job now? I definitely didn't feel like that. Also, I hated 'messages', whether I was at the receiving end of one or the giving end. I wanted to debate and to argue. It was common for old people to be nostalgic, to remember their carefree childhood and the enjoyable days of their youth, etc. But at eighty years of age, I see a different picture. For me, by and large, today is always better than yesterday. I vividly recall all the various tensions in my childhood—in the ration shop, the flour mill, the forest fuel depot, the evening grass bazaar—everywhere I lived with the fear that I might be cheated. True, there were pleasant days too, during summer vacations when all the cousins would converge at our ancestral home in Shoranur, and we would

go trekking to Bharathappuzha, pick up and suck juicy desi mangoes, make deep holes in the shallow waters to take a dip in, play football on the sand, recite poems, and so on. I now have alternative and more varied means of entertainment like writing, debating and dreaming. I am one of those lucky ones who are able to say this almost everyday that today is better than yesterday. This is a trait that I perhaps inherited from my mother. There is an entry in my diary on 8th December 1959:

What is the purpose of life? To be happy. Yes, only to be happy. And what are the reasons for being unhappy? Disappointment and dissatisfaction. So, to avoid being unhappy never get disappointed, and for that never aspire for too much. And if you don't get what little you aspire for, just shrug your shoulders. Try to throw out those disappointments one after another from the category of sorrows and look at them as simple facts. If somebody dear to you dies, it is a fact that they are dead. No amount of grieving and suffering will bring them back. Understand this fact and there is no more sorrow.

There is another entry dated 4th January 1959:

Is pleasant existence alone a sufficient justification for living? Why should one continue to live if he is given to understand that he is not a genius and that he will not achieve anything wonderful? Is it only the mere hope that one may become well known or is it because one has an immense curiosity to unravel the secrets of nature? I don't know.

Years later, I read an essay titled 'The Future of Happiness' by Mihaly Csikozent in the book, *The Next Fifty Years*, edited by John Brockman:

Among the other things we learn is that people who are engaged in challenging activities with clear goals tend to be happier than those who lead relaxing, pleasurable lives. The

less one works merely for oneself, the larger the scope of one's relationship and commitments, the happier a person is likely to be.

I am happy.

The second shock that my wife suffered was the small size of my father's house in Thrissur where I brought her after the wedding. It was quite crammed there with my four brothers, two sisters and our parents. However, she didn't have to live there forever, and after spending a few days in Thrissur we left for Bombay. The Bombay flat was even smaller than my Thrissur home. But the newness and excitement of a large city soon helped her to accept it. Those days, we had a cook called Narayanan Nair, who was almost like a father to her. Once she got acclimatised to the new surroundings, he left, and life fell into a steady rhythm.

And then the second opportunity to go to the USSR came up. This time, since Dr Bhabha had already made a positive mention on my application, there was no problem in my being selected. Though the official proceedings took a long time, by August–September 1962 everything was cleared and I was ready to leave for Moscow. I took my wife to Thrissur to leave her with my parents, but my departure was delayed due to some bureaucratic hurdles. Perhaps because of that or some other reason, my wife suddenly fell into depression and I had to rush to Thrissur to be with her. It was the first time ever that I travelled in an aeroplane from Bombay to Kochi. I was with Bhavani for a couple of weeks. She had partially recovered from the depression when I got information that all my papers were ready and I should leave for Moscow by the end of October. The depression, or anxiety neurosis as it was medically diagnosed, became a regular occurrence in Bhavani's life and would recur at least once in two years.

Bhavani received the third shock of her married life much later when I decided to resign from the BARC. Our children were very young, studying in classes V and II. I was not going to receive any pension and I had no family income to fall back on. My father and brothers, though no longer dependent on me, couldn't be of any help. Suddenly life had become very unstable and unpredictable for her. Though it did not affect our future—I was able to educate our children well, we owned a house and there was never any acute shortage of money—she had to deprive herself of many things that she would've liked to have like a fridge and TV set. Now we have all these little pleasures and comforts, but in those years when she wanted them most, they were luxuries for us and we could not afford them. All my friends owned cars and she wanted me to have one too, but she also realised that we could ill afford it. She also knew that if I had continued with the BARC, we could have had all these things.

Yes, I have not been fair to Bhavani in many ways. I couldn't help my physical stature, but I could have given her a better life, which, if not vainly luxurious, could have at least been a little more comfortable. But the way I see it, I couldn't help that either. I had committed to work full-time for the Communist Party of India (Marxist) and that was the reason for my resignation. If I were to stay true to that promise, there was no other way out for our family but to suffer a lot of these inconveniences, so to speak. If I had continued in the BARC indefinitely, I would have become thoroughly frustrated. I had already come to the conclusion that nuclear energy had a future neither in India nor anywhere else in the world. There wasn't any science that could handle radioactive wastes. The smiling faces of the children I had seen in Moscow were beckoning me to work for a similar future for children in India. If I had turned a blind eye to them, I don't know how I

would've lived with myself. I had to take a decision and I did. I resigned and began working for a social revolution. I do not regret that decision. I think I have managed to allay my wife's worst fears and provided her the necessary comforts of life, but perhaps I have not been able to heal the initial wounds that my actions caused.

Moscow

In Moscow At Last

It was the last week of October 1962 when I landed in Moscow. The result of five years of aspirations and two years of preparation was before me. It was already much colder than I had ever experienced in my life. Of course, at that time I could never have imagined what Moscow winter would be like.

Matha Prasad Chaurasia came to receive me at Sheremetyevo airport, from where he took me to my hostel at 7, Lefortovskiy Val. The next day, an assistant from the foreign students department of the Moscow Power Engineering Institute (MEI, *Muskovskii Energi Theecheskii Institut*) accompanied me to help me buy warmer clothes. She knew English and even though I had learned Russian for two years in India, I did not know the Russian word for cheap. Since we were going shopping, it was important to know how to say costly and cheap in Russian. Hence, *dorogoe* and *disheviye* were the first words I learned from her.

Warm underclothes—*koltzoni* and sweater—were easy to get, but the more important item of clothing to combat the Moscow winter was the overcoat. We searched relentlessly but couldn't find one that would fit me; they were all too big. Then, my guide told me, 'Poideom Detskii Mir', which meant that we should try in the children's section. And sure enough,

I managed to get an overcoat that was perfect for me and was to be my closest companion for the next three years.

In the hostel I met other Indians like Sridhar Bhat, Ramamurthy, Razvi and others. My roommate was a Russian, Victor Maiboga. He knew very little English, and so in the beginning we managed with my Russian. The first word that he taught me was *meod*, honey. At first I had a lot of trouble identifying honey in the market, as I would go around looking for a clear, brown, viscous substance. What I didn't realize was that in a cold place everything solidifies and that I should actually be looking for a hard, ghee-like substance. Victor initiated me into vodka too. My first sip of the liquid immediately set my insides on fire. This wasn't because I hadn't tasted alcohol earlier. At Jogeshwari in Bombay, my friends and I had once shared a bottle of country arrack. But drinking vodka was a completely different experience.

In winter, there was a kind of cold storage area for every room. This was the space between two layers of glass windows, designed to provide insulation to the room. Outside, the temperature was minus 30 degrees Celsius, while indoors it was 26 degrees Celsius. The rooms were centrally heated and the water from the college power station flowed through radiation baffles in each room, in all the buildings belonging to the MEI.

The first week of November is a week of festivals in the USSR. 7th November is celebrated as Revolution Day, which is 21st October according to the old calendar and hence also known as The Great October Revolution. By the 4th, the sky was clear and the sun came out shining brightly. People went out dancing and to bask in the sun. I had not seen the Moscow sun till then. It had been cloudy and overcast since I arrived. The temperature, however, remained at a bitter minus 7 degrees Celsius. The Russians call it *maroz*, frost. It is less cold when the sky is overcast!

The hostel had a common kitchen, and our kitchen-mates were mostly Chinese. The Sino-Indian war of 1962 was still going on, a fight between a brother and a friend, as the Russians used to say. In the room next to mine lived B. Sridhar Bhat and V. Ramamurthy, who had already been in Moscow for a year. Bhat was one year my junior in Trivandrum Engineering College and my younger brother's teacher at the NSS College of Engineering, Palakkad. He was a strict vegetarian and managed to remain one even in the USSR. It was difficult because for about seven months, one only got potatoes and onions as vegetables. Even in the *stolovaya* (canteen), one used to get mashed potatoes instead of rice. The main dish for the Russians is a meat preparation—mutton, beef or pork accompanied by rice, mashed potatoes, boiled rye (*grecha*) or *macorronni*. It's very similar to the way we eat vegetables with rice or chapatti.

Food in the *stolovayas* was cheap. One plate of *shi* (cabbage soup) cost only fourteen kopeks. (There are a hundred kopeks to a rouble, which was at that time roughly equivalent to one US dollar and five Indian rupees.) Bread was free on the table, but later they started charging two kopeks apiece because people were wasting it. A plate of *shi* and four slices of bread were enough to fill the stomach, though it wasn't a balanced diet.

An Indian friend, Om Prakash Chhabra, once made a bet with a fellow national that he could live off twenty-five roubles a month, which was only one-fourth the amount of our scholarship of a hundred roubles. Chhabra won the bet by surviving on *shi* and bread for a month. He was a *stozhor* (trainee) from Bharat Heavy Electricals Ltd (BHEL). There were two categories of students in the hostel: The *stozhors* came for one or two years of research work, and the *aspirants* were registered for a doctoral degree. In the USSR, the first research degree was *Kandidaat Nauki* (Candidate of Sciences), which was equivalent to a PhD, and then *Doctor Nauki*

(Doctor of Sciences), which was equivalent to a DSc. Both degrees were extremely difficult to obtain. For both of them, one had to defend one's thesis in an open forum, with the examiners participating in the questioning too. I had observed the humiliating failure of a professor who already had a PhD in defending his DSc thesis.

My first week in Moscow was buried under the October Revolution festival. I was introduced to the Department of Atomic Power Stations only in the second week. The head of the department was Professor Dr Theresa Christoforovna Margulova, a kind, matronly seventy-five-year-old. In the USSR, there was no compulsory retirement in those days. One could work as long as one's health permitted. We also had Professor Vukalovitch who was already eighty-five. The Steam Tables he had prepared were every power engineer's companion. My own guide was *Kandidaat Technicheskii Nauki* (Candidate of Technical Sciences–PhD) Professor Boris Alexandrovitch Dementyev, an affectionate person, but not too bright. I got more academic help from Professor Margulova than him, even though she wasn't my guide. She was quite motherly and also well known in the academic circles. She was an expert in the field of corrosion and water chemistry of nuclear reactors.

Every department and institution then had a *thri ugolnik* (triumvirate), consisting of a representative of the Communist Party of the Soviet Union–Bolsheviks (CPSU-B), *komsomol* (the youth) and the trade union or the staff. This *thri ugolnik* took all the important decisions regarding the department in consultation with the professor, of course. Mr Kabanov, the Party representative, was the secretary of the triumvirate. He used to practise what little English he knew with me. I had quite a few discussions with Kabanov about the Party, the problems of the USSR, and so on.

In the department, I was attached to a Chinese student, Chen Sya Su, who was about to complete his dissertation. He was working on a problem related to the flow of steam water mixtures and the diffusion of steam bubbles in water. The research was financed by another institute more intimately connected with the nuclear power programme of the USSR.

The first power reactor in the USA at Dresden was a boiling water reactor. There, the steam was produced directly within the reactor and no separate heat exchanger was required. The first Indian power reactor at Tarapur was of the same type. India later decided to go on a natural uranium-heavy water route instead of the enriched uranium-ordinary water route. However, the largest percentage of reactors under construction across the world were water-moderated and water-cooled reactors. They were either of the pressurized water reactor (PWR) type (known as VVR in Russia), the reactors which the Russians built for India in Koodankulam, or the boiling water reactor (BWR) of the Tarapur type.

The experimental problem initiated at the MEI through Chen Sya Su was related to the BWRs. The distribution of steam bubbles—which had much less moderating power than liquid water—within the core of the reactor has much relevance in the physics of the reactor. This distribution, however, is chaotic. The questions that Chen Sya Su was presented with were: Could we find some way of determining the average distribution of steam bubbles at any given time so as to facilitate reactor physics calculations? And could we find some kind of diffusion coefficient to describe the movement of steam bubbles within the water column?

I was to carry the project forward as Chen Sya Su was not able to complete it. I managed to complete it within three years and obtained a PhD (candidate) degree in the bargain. The result of the investigation was negative because the line of

attack based on the hypothesis of random diffusion of steam bubbles proved to be unfruitful. It was not, however, necessary to attain a positive result to be eligible for a PhD degree. The degree was only a recognition of one's ability to conduct independent research. So I was not particularly bothered about the negative nature of my findings.

I was supposed to set up a major heat transfer study facility in the Reactor Engineering Division of the BARC, which deputed me for these studies. Because of the very interesting turn of events later, however, I never did set up that research facility. Instead, I helped set up Chintha Publishers and Deshabhimani Book House for the CPI(M). But that happened more than a decade later.

My years in Moscow, however, played an important role in my life. In the hostel, which had a kitchen on the same floor as our rooms, Bhat and Ramamurthy and I formed a cooking team. We took turns to make dinner. Breakfast was made by us individually and lunch was had in the *stolovaya*. My favourite breakfast item was a kind of pancake made with wheat flour, milk and sugar and roasted with ghee. Milk, butter and ghee were cheap and plenty. One litre of milk cost thirty kopeks and one kilogramme of good quality cow's ghee cost three and a half roubles. The other common breakfast item was bread and omelette.

A standard full lunch would begin with a salad as the starter, which would be quite tasty, like all Russian salads. The second course would be a soup. One could ask for either a full bowl or half. Normally, half a bowl used to be sufficient for me. I liked almost all of the many Russian soups. Some of these were *shee*, a plain cabbage soup; *soothuchiny*, sour cabbage soup that had to be fermented for a day; *borsch* which was made with beet root and cabbage and could be served hot or cold; *harcho*, which had pieces of meat and some pulses in it;

and *solyanka*, a thin soup with sausages and meat, embellished with celery. There was milk soup, which was nothing but rice, vermicelli or rye boiled with sweetened and salted milk. In Kerala, it is known as *palkanji*. There was also pulse soup, which had ground pulses. The only soup I did not like was the fish soup because I did not savour fish in those days. I began liking fish only after returning to Kerala in the early seventies. Today, I generally prefer fish to other meat items.

The total expenses for food came to fifty to sixty roubles a month. Eating in the canteen was like a project each time, especially in winter. One could not go into the dining room with a heavy overcoat on; it had to be deposited at the entrance. The space available for hanging overcoats was limited in most canteens. There would be a heavy rush during the lunch break, and those who had eaten had to come back and claim their overcoats to make place for a new customer.

One had to stand in the queue from fifteen to thirty minutes to deposit the overcoat. Then there was the queue at the cash counter, which usually took fifteen to twenty minutes. After placing the order, one paid and got the coupons, which then had to be carried to the serving counter, where there was yet another queue. On an average, the total time one had to spend in queues at the canteen could be anywhere between thirty and forty minutes.

Of course, there were queues everywhere in the Soviet Union—in provision shops, medical shops, wine shops, etc. Even to get a seat in the library, especially in the Lenin Library, one had to stand in queue. An average Soviet citizen had to spend, at that time, a minimum of one to one-and-a-half hours a day in queues. This led me to coin a word, *queuevitham*, which is a pun on *jeevitham*, which means life. The word that I coined inspired a famous leftist poet of Kerala, Punloor Balan, to write a poem.

There weren't too many shops, especially eateries or canteens, but that wasn't the case with bookshops. They were too many of those, much more than any other shops. To go shopping in most cases meant going to bookshops. Books were damn cheap. Complete works of Walter Scott, Shakespeare, Charles Dickens and many others were available in Russian. Even the original English versions were available. It was the CPSU(B)'s policy to provide books at low prices, which was also in tune with its philosophy. I did collect a large number of books to take home to read, translate and propagate. Unfortunately, most of them are lying in boxes, largely unread.

The great shopping event for every Muscovite was going to the Gosudarstvennii Universalnii Magazine (GUM) or the state departmental store. Occasionally, word would spread that some rare foreign-made (especially US-made) product was on sale at the Red Square GUM. I am not exaggerating when I say that the queues that would form outside the GUM used to be several hundred metres long. Often, people who stood in the queue did not even know what was on sale, except that there were 'some foreign products'. Yes, they were really very crazy about foreign goods.

The Soviet products, though functionally sturdy, did not have the fine finish of the US or European products. Though in the three years that I lived in Moscow, I did find considerable improvement in the quality of consumer goods as well as a fall in prices. But, they were still not at par with American or European products. The official slogan of the government and the Party, with respect to production and consumption of consumer goods, was 'catch up with America and surpass it'. The question of what their end use would be was never thought about. The attitude in this socialist country towards consumption was not very different from that in a capitalist society.

Though there were textbooks like *Upbringing of Socialist Human Beings*, they were only necessary for passing an exam and not for applying to life. It was the same with the theory of Marxism, a compulsory subject for every Soviet student. Seldom did the students try to excel in it as they did in mathematics or science. A 'satisfactory' grade was considered good enough for it. It looked like Marxism had already degenerated into just a subject for completing a course.

If one added to these two phenomena—a craze for consumer goods and the rejection of Marxism as a philosophy for life—the third phenomenon of the dollars black market, the picture would be complete. The official exchange rate was 0.9 rouble for one US dollar, but in the black market one was ready to give up to three roubles for a dollar. Dealers approached foreigners in almost every park. The fall of the Soviet system two-and-a-half decades later, therefore, did not come as a surprise to me.

There were then a large number of Indian students in Moscow and the largest contingent was in Lumumba (Friendship) University. V. Govindankutty (also known as the senior Govindankutty because there was another one called P. Govindankutty) and C.N. Parameswaran, both from Thrissur, were already studying medicine there. The Moscow State University too had a good number of Indians, both as trainees and PhD scholars. One of them was A.K. Jalaluddin, a physicist working on his PhD, whom I did not know at that time but later met in Delhi in 1978 at an NAEP (National Adult Education Programme) meeting. He was then working for the government of India as the director of adult education. Since then, we became good friends. The Indian embassy in Russia had several Malayalis like Air Commodore Balachandra Menon and Ambassador T.N. Kaul's private secretary N.B. Menon. There was Unnikrishnan of the Press Trust of India and his wife Thankedathi, and Chandran, a refugee from

India married to a Russian and settled in the USSR. All these people formed a close-knit Malayali community in Moscow and played a big role in my not feeling homesick.

Of the three languages I had to juggle at that time, I communicated in Malayalam the most, then in English and Russian came in only in the third position. All my lectures were in Russian and I could follow them well enough since I had already learned the language in India, but I took notes only in English. Of course, I had to attend a Russian language course and pass an examination. This was easy as it happened along with my other courses and I managed to achieve the required proficiency in the language in the first year itself. Irina Davidovna Karsoonskaya was my Russian teacher and I was her only student.

Students who went to the USSR without any prior knowledge of Russian had to undergo a full-fledged one-year course in the language. I was exempted from that and continued to be in the just-able-to-manage stage all the time. Three years later, I wrote my thesis in Russian. My poor guide had a tough time editing it and carrying out extensive corrections.

Vladimir (Volodya) Ryabov, who had started working on the project with Chen Sya Su, was my colleague in my research work. I think the institute was a bit partial towards me because they allowed me to submit my thesis before Volodya, who had to work for another year before submitting his. There were two technical assistants in the research team, Ivan and Alexander (Sasha) Hlebnikov. The many conversations I had with them while experiments were going on and while camping out in the forest with other friends gave me ample opportunity to get a sense of what ordinary people thought about the socialist system and the Party. None of them had any complaints against the system in general, but many were unhappy with the Party.

Once, while a few of my colleagues from the institute and I were camping in a forest area about a 100 kilometres away from Moscow, we came across a group of colourfully dressed men and women, drinking heartily and making a lot of noise. They looked like they belonged to a different country. When I asked my friend who they were, he replied deprecatingly that they were Party people. His contempt for them was clear in the way he spoke and looked at them. That the Party people were enjoying privileges that they did not deserve, was very obvious from his body language.

If anyone asked me what I enjoyed most in the Soviet Union, I would unhesitatingly say *pahhot*, that is, picnics in the forest. It would usually be a two-day outing. A group of very close friends would set out on Friday evening after work, with tents and provisions, all packed in rucksacks. Each one would have to carry a load of fifteen to twenty-five kilogrammes, which would consist of poles, canvas and ropes for setting up two or more tents. The provision bag would contain several bottles of vodka, vessels to cook, marinated meat to make *shashlikhi*, potato, onion, marinated cucumber and tomato, bread and other miscellaneous items. When Indians joined the group, we took wheat flour, oil and kadhai to make puris. I often used to take a pack of *gulab jamun*, made using ingredients that were readily available. Milk powder mixed with just enough condensed milk made an excellent *khoya*, which fried in ghee and dipped in sugar syrup made a deliciously sweet *gulab jamun*. But it was too heavy on the stomachs of my Russian friends, whereas they found the popping puri quite interesting.

We would reach the selected location in the outlying forest area by around 6.30 p.m. Usually, we chose to do this in summer so that the sun setting later in the day would give us enough time to clear a site, cut the pole into smaller parts

if necessary, collect firewood, gather enough leaves so they could function as beds and pitch the tent. While one group did all this, another group would start a campfire and set up the horizontal bar above it to hang the cooking vessels. First, we would cook skinned potato with salt and then dress it with butter, which used to taste heavenly. Once the fire was strong enough for roasting, the pieces of meat, marinated with salt, vinegar, pepper and onion, would be stuck on skewers and held over the fire for roasting. We didn't cook whole animals though.

The *shashlikhi* being ready, the boiled potatoes cooked and the butter at hand, it would now be time to bring out the vodka. This was always accompanied with many toasts. In the presence of the Indians, the first toast would always be 'Long live Indo-Soviet friendship'. Toasting peace, international friendship and the collective were quite common. Several toasts were made till the bottles were empty.

With each toast, one portion of vodka, which is about 50 millilitres, would be knocked back (*do dna* is what they say in Russian). Vodka is never sipped and it is always drunk neat, never mixed with soda or water. The only exception to this is having it with tomato juice, but the two are not allowed to mix. One first fills the glass with vodka and then adds tomato juice from the side in such a way that the juice sinks to the bottom and the alcohol floats on top. This is how Bloody Mary is made. This too would be downed in one gulp by us.

After a few toasts, everyone would become very expansive. My Russian friends would shed their inhibitions and start using slang and colloquialisms without bothering with whether I understood anything. That helped me to enjoy Russian classics in original. It was during these interactions that I got to know their innermost thoughts. I realized that they had massive

problems with the Party, which had become quite corrupt, both ideologically and morally.

I got the feeling that the system would not stay for long and would collapse. The only corrective mechanism for a corrupt dictatorship is an active democracy, which had been absent for a very long time in the country. The average Soviet would have been at a loss if exposed to a really democratic society where she/he had to take decisions and be responsible for them. The Soviets did vote for or against a candidate fielded by the Party, but no other party or candidate could compete. Voting rates of more than 90 per cent were quite common, but this was done mechanically. Every Soviet citizen had to vote; there was nothing democratic about it.

The tragedy of communist movements elsewhere too was that they feared real democracy and were afraid of initiatives by the people. They did not like even the word 'people'. For them, only classes existed—one was the class which supported them and the other was the enemy class that was against them.

I used to share my fears with Comrade Kabanov, the man who represented the Party in our department. He used to say to me: 'Yes, Paramesh, we know this. Things are not too good with us. We are trying our level best to rectify the situation.' But they failed to do so. A corrupt system cannot correct itself and is bound to fail because rectification is painful and people will avoid it if they can.

The Sino-Indian war was going on when I was in Moscow. The only patriotic act that we could do there was contribute to the war fund. The responsibility of collecting contributions from the Indian students in the MEI hostel fell on me. Everyone would be asked to give up 10 per cent of his or her stipend as contribution. It wasn't easy to part with that amount every month, but still people contributed. There were other collections too for the war.

Moscow had an Indian Students' Association, which was started in 1963. The senior Govindankutty was its founder-secretary. There were about two hundred members, spread out in a number of institutes, with Lumumba Friendship University, Moscow State University and Moscow Power Institute having the maximum numbers. I was also active in it. Later, in 1965 I became its president with Satish Kalra as secretary. The membership fee of the association was part of the contribution towards the war effort.

I was a nagging fund collector. Often, when I entered the room of a colleague, he would straightaway ask, 'How much?' It was a thankless, yet interesting, task. The faces people made when they were forced to part with money were varied and amusing. One particularly difficult person was Surendra Prasad Sinha. My friends once challenged me, 'Parameswaran, if you get S.P. Sinha to contribute, we will double our contribution.' For a couple of weeks after that I used all my persuasive powers with this man, but failed. He refused to part with even a single rouble. None of this, however, prevented me from collecting contributions from others during the Indo-Pak war later.

In December 1962, the institute organized a trip for the Indian students to Riga, the capital of Latvia. It was a very memorable one. There were three types of people amongst the Indians: those who were inimical to the Soviet system, those who were suspicious of the government and those who were friends of the Soviet Union and socialism like me. B. Ravindranath from Indian Institute of Technology (IIT), Bombay, belonged to the first category of Indians and was vociferously against the USSR. He was sent back before he could complete his term because of his incessant anti-Soviet stance. In the group that went to Riga, there was a paranoiac whom we called Mr Koppal, who was certain that the Soviet police were following us everywhere and that they had bugged

our rooms in the hotel. As proof he showed us two wires protruding out of a small hole in the hall. He promptly cut it only to realize that it was the telephone line!

During our wanderings in the town, a boy, Yuri Slokat, approached me. He and I became quite friendly later, and when I returned to Riga in 1965 with Bhavani, he was there to take us around.

The first year passed very quickly, during which I used to write long letters to my wife quite regularly. June–July was the time for summer vacations, and since she had a breakdown just before I left for Moscow, I had to go back to Thrissur to see her during the vacation.

On 2nd June, I flew from Moscow to Tashkent en route to Delhi. The flight was at 2 a.m. Within a couple of hours, the sun rose over a sea of clouds. The view was unforgettable—an expanse of red and yellow with the sun emerging from it. The flight reached Tashkent at about 8.30 a.m. local time. The temperature in Moscow when I left was two degrees, but in Tashkent it was already above forty degrees. I found the weather quite intolerable in the one day I had to stay there. The food in Uzbekistan was surprisingly very familiar—it was Mughlai, as the Mughals had come from Samarkand to Uzbekistan. From Tashkent, I flew to Kabul and from there to Safdarjung airport in Delhi. The temperature in Delhi was forty-eight degrees. From Delhi I headed to Bombay and then to Kochi. I lost five kilogrammes in five days due to the heat!

The two months of vacation went by quickly. I was going to be away for two more years in Russia and wasn't going to be able to visit India next year. We had to find something for my wife to occupy herself with. We decided that having a child would be the best solution. So, we planned accordingly. Before I left for Moscow, the arrival of the new member of our family was confirmed. My first son Arun was born on

13th March 1964 but I saw him only one-and-a-half years later, in November 1965.

From August 1963 onwards, I got deeply immersed in my research work. Within three months, an earth-shaking event took place. President John F. Kennedy of the US was assassinated. The events that followed and the funeral procession were broadcast on television. I was seeing television for the first time and realized that something that was happening across the globe could be witnessed sitting in the lobby of our hostel. The power of television struck me hard.

Less than a year ago, a grave situation that would have developed into a world war had been averted by the Soviet Union. Faced with a threat by the US that it would not hesitate to declare war if the Soviet fleet advanced any further into Cuba, the USSR withdrew. Kennedy was aching for a war because the US could not tolerate peace for a long time. Peace unsettles the US economy. Levitan, who was the ace announcer at Moscow Radio, announced the peace action of the Soviet Union in his sonorous voice. However, some of us Indians were not happy with the Soviet decision to turn back and believed that the Soviets had betrayed Cuba. When I expressed this opinion to some of my Russian friends, they asked me, 'Have you ever experienced war? Do you have any idea how many fathers, brothers, sons and husbands we lost during the Second World War? There was literally not a single home that had not lost a member in that war. We don't want any more wars. Absolutely not. Of course, if anybody attacks us, we will fiercely defend ourselves. But we don't want to be the cause for a new world war.'

Actually, this decision proved to be better even for Cuba. Kennedy lost a golden opportunity to openly attack Cuba on the pretext of the Soviet presence and the imaginary threat it wielded against the US.

The USSR definitely did not want war. The stakes were too high for them. They were building socialism and hoping to move on to communism soon. The extent and depth of social security provided by the system was amazing. The minimum income of anybody was roughly three times that required for subsistence. Everybody had a legal right to work, and if anyone got sick, the trade union would look after them and pay them a full salary for as long as required. The state looked after the children like little princes and princesses and also educated them. It had built pioneer palaces for them. Even today I can see the happy and smiling faces of the Soviet children in front of me. The idea that life was worth living if we strive to provide children all over the world, including India, a life similar to the one Soviet children enjoyed took deep root in my mind.

College education in Russia was not only free, but students were also given scholarships. But not everyone would get admission in a university. The number of seats was decreased or increased depending on the long-term requirement of the economy of the country. Those who could not make the required grade would get employment. The difference between the emoluments of a skilled worker and a professional, like an engineer or a doctor or an academic was very small. A driver would at times get more than a doctor or an engineer. Having a home to live in was a basic right, though the size of the house depended on the number of members in the family.

My professor Teresa Christoforovna had only a two-bedroom apartment, while Ivan, our mechanic who had a large family, had a four-bedroom apartment. Rent was negligible, as was the price of electricity, gas and water. Travel was cheap too. Three kopeks for a tram, four for a trolley bus and five for the subway, irrespective of the distance travelled. Long-distance train and flights too were inexpensive. At that time, there were

plans to make travel totally free, which would be taken out of the state budget.

Thus, with all basic necessities—job, medicine, housing, education and healthcare—taken care of, there was no need for the people to amass wealth or be hungry for wealth. They felt secure about their future and their children's future.

The quality of life of an average Soviet citizen at that time was far better than that of an average US citizen. Unfortunately, the powers that be, the Party leadership and the state did not think so. They compared the quantity of consumption to the quality of life, and wanted to surpass the US in consumption. In fact, they did managed to surpass the US, but not in production and quality of life, but in insecurity, unsustainability and wastage. Though all of this happened much later, even in those early days there were indications of it.

Gradually, the outline of a different future society was taking shape in my mind. And I listed it out in my head:

- I want the children of my country to be as happy and as well looked after as the children of Soviet Union.
- I want the citizens of India to feel the same level of security for their future and the future of their children.
- I want the control of economy in the hands of the people and not a centralized state as it is in USSR.
- I want to prevent the degeneration of the Party and its leadership, as is becoming evident in the USSR.
- To achieve all these, I know that capitalism and private ownership of the means of production will have to go.
- At the same time, the state shall not assume the role of monopoly capital.

□ Co-operative or collective right to use natural resources should be the slogan.

- People should be capable of and willing to undertake the responsibilities of running society—democratic participation.

All of us have responsibilities towards our own family. We are employed and have a job. How are we going to transcend the limitations imposed by it?

* * *

During the summer of 1964, I went to the Gelenshik, a vacation spot on the Black Sea coast. There were about a hundred students from various countries, who were put up in sheds that could accommodate six persons each. Each country occupied one or more sheds. I was the only one from India. There was one person from Nepal, one from Indonesia and one from Greece. All four of us got together and occupied one shed, which came to be known as the international shed. I stayed there for two weeks and then went to Harkov to meet K.M. Narayanan Namboodiri, who was doing research there. The Gelenshik airport was an interesting one. You stood in a queue, bought a ticket and then stood in another queue. Planes would come one after another, passengers would get in, and when the plane filled up, it would take off. There was no regular runway and the entire area was a grassy maidan. Planes would just land and take off. Inside the planes, the seat was a wooden bench laid longitudinally with belts attached to it for each individual. None of the flights were more than thirty to forty minutes long and so this spartan arrangement was sufficient as well as very cheap.

By the end of 1964, I was beginning to see the end of my work and started collating all the data I got into a coherent thesis. There was a lot of computer work to be done, for which I got help from another faculty member. Those days one had to

write one's own programme, punch it on tapes and cards, feed it into the computer and run it. I had to spend many dozens hours on the computer. Today a personal computer can do the whole thing in minutes.

However, the hours at the computer were quite pleasant, particularly because of the beautiful girls that were around. Girls in Russia were very free with Indians, and a few of the Indians later married some of them. More than half the Indians there had girlfriends. Ramamurthy, Mata Prasad, all except Bhat were seeing someone. There were girls who were interested in me too, but I stayed away. This wasn't because I considered it a sin. Then, and even now, I believe that sex is a biological necessity and should not be morally condemned. To advocate such an opinion—of separating sex from morals and family—I needed to have the 'moral' authority. I had to pay a price to have this opinion, which I willingly paid by abstaining from being involved with and dating girls.

A Memorable New Year's Eve

It was nearing the end of 1964, and on the eve of the new year, twenty PhD scholars from India assembled in the common room of our hostel. We were all doing research in the Moscow Power Institute. After celebrating the advent of the new year with lots of Bloody Mary and plain vodka toasts, we were in a rather expansive mood. All of us were engineers working in various research institutions and public sector undertakings in India. We were all suffering from a tinge of guilt, as is wont to happen after downing a few vodkas. We felt that we were not giving back to society services commensurate with what society was giving to us. We felt that we should do something, if not

within our own institutions, then outside them. But, what was it that we could do?

My own feelings ran deeper. I came from a leftist family background and my father was a communist sympathizer. Both C. Achuta Menon and E.M. Sankaran Namboodiripad (EMS) were personally known to him. His younger brother and EMS's elder brother had married sisters, and Achutha Menon was our neighbour. Personally, I had great admiration for the achievements of science and technology in the Soviet Union. I had been living in Moscow for more than two years already and had also travelled widely.

I was now convinced of the necessity of a revolution in India. I was just not very clear about the sort of revolution it would be or who would bring it. Would it be the CPI or the CPI(M)?

An Indian scholar in Moscow University, Mr Poorna-chandra Das had been conducting a course on dialectical materialism for interested Indian scholars, which I attended too. Earlier in India, I had read a book called *Fundamentals of Marxism–Leninism* published by the Institute of Marxism–Leninism in Moscow. I did not benefit much from Das' presentation. I was also becoming increasingly apprehensive of the future of socialism in the USSR. The distance between the CPSU(B) and the people had been increasing, and democratic centralism had since long degenerated into caucus dictatorship. In the bureaucracy, red tapism was on the rise. The younger generation had been showing less and less interest in studying Marxism. Workers had practically no control over production and distribution, and antagonism between villages and towns had been sharpening, though there was some change in production relations. The tools of production—equipment and technology—were identical to those of capitalism. And finally, instead of creating a new type of human being, the

socialist human being, the stress was on catching up with and overtaking the USA both in production and consumption of even those commodities that did not have any welfare value.

All this was against what was envisaged in the *Communist Manifesto*, which expressly directed de-urbanization by dispersing the industries within agriculture and creating 'rurban' communities. Many of these things became clearer to me after returning to India. Some of my apprehensions about the Soviet Union, which I had shared with the CPSU(B) members in my department, I shared with the Kerala public in an article entitled 'We Want a New Policy on Science and Technology', published in the May Day issue of the *Chintha Weekly* in 1974.

But in 1964, when I was still in the Soviet Union, I had only great admiration for its achievements. At the same time, I was also convinced that democracy with the genuine participation of the people was all-important and that such a democracy was only possible at a much smaller scale than, for example, Leningrad Metal Works, which produced ten million tonnes of steel annually. In a plant like that, only hierarchical relations could prevail, not horizontal and democratic ones. Both processes and products needed to be reconceived to be in tune with socialism.

* * *

Most of us assembled there in the common room on New Year's Eve were critical of all the political parties we had entrusted to govern the country. One suggestion was that we should help set up a political party that is different from the existing ones. An animated discussion ensued and Manaskumar Sinha suggested that electrical engineers should take up the leadership of such a party. He said that party meant organization, which meant networking, which further meant electrical engineering!

When the discussion began to take an even more flippant turn, I put forward a suggestion. In Moscow, one could find more bookshops than hotels or other eateries and some of the best books on science and engineering were available only in Russian. Wouldn't it be a great service if we could make them available in English? All of us knew Russian, English and the subject. Why couldn't we start a major translation programme?

This suggestion got serious support, and Y.V.N. Rao, who later became the principal of Regional Engineering College, Calicut, took the responsibility of exploring the possibility. I had also noticed two other things. First, Russians were voracious readers. More than half the people standing in queues—whether in eateries or shops—had a book in their hand. Second, the USSR had as many languages as India, and the medium of instruction was either the mother tongue or the local dialect. Students could even write their PhD theses in Uzbek, Armenian, Moldavian, Kazak or in any other language of the Republic.

For a nation to progress, its people should have access to an ever-widening vista of knowledge in their own language. One of the basic requirements for India's progress—besides basic education for all—was an increasing wealth of scientific and technical literature in all Indian languages. I suggested that we have a big movement in India to achieve this. I took the responsibility of initiating this for Marathi since I had been living in Maharashtra as well as for Malayalam since I am a Malayali. But not many were excited about it. They felt that Indian languages were incapable of dealing with such subjects. I had subconsciously become aware of the link between real democracy and rurbanized economy on the one hand, and the necessity of a major science and technology (S&T) revolution on the other. To achieve this and to link it with general S&T awareness of the public was a huge task.

By this time, I had become an established science journalist. I had been sending regular despatches on Soviet advances in space sciences and other developments under a pseudonym, *Madangarli Moscow*. The name was a way to get magazine editors to take notice of me. N.V. Krishna Warriar, the editor of *Mathrubhumi*, a national daily in Malayalam, did take notice, though he had earlier returned better articles. Thus, during 1963 and 1964, several of my articles were published.

I had already begun translating into Malayalam in 1958–1959. The first book I translated was *Explaining the Atom* by Selig Hecht and Eugene Rabinowitch, which never got published. I felt I could write a simpler book, for high school students, on the principles of nuclear reactor theory. This one was published in 1966, called *Paramanu Sastram*. A part of this book that dealt with isotopes and radioactivity was expanded and simplified and submitted for a competition in books for neo-literates, where it won an award.

Later, in India, when I became seriously involved with the National Literacy Mission, I wondered how my book had been selected for the award, as it was utterly unsuitable for neo-literates. In 1962, I had written another book entitled *Stars and Planets*, which won the National Prize for Basic and Cultural Literature in 1964. I was becoming a science writer and was facing a problem that all science writers in the vernacular had been experiencing: there was a paucity of and confusion about scientific terms. As a solution, I began the task of coining them. When I went to Moscow for higher studies I had taken with me a copy of the *Paribhashik Shabda Sangrah: A Consolidated Glossary of Technical Terms, English–Hindi*. It was hot off the press when my cousin N.N. Namboodiri, who was part of the team that prepared the glossary, sent it to me. My intention was to come up with a similar English–Malayalam glossary, and I had been at it during my spare time in Moscow.

By the end of May 1965, I had finished all the work at the institute and had submitted the final draft of my thesis to my guide for language correction. There were no changes to be made to the content because it had been discussed a number of times already. I was going to be free from June to September and in October I had to defend the thesis. Since there would be no heavy academic work to keep me busy, it was decided that Bhavani would join me in Moscow. There was a lot of trouble arranging for her visa, but finally she was able to fly out to Moscow in June. By that time, my roommate Victor had already been assigned family quarters and had moved out. So I had the room all to myself, which became my family room for the next five months.

It had been nearly two years since Bhavani and I had lived together. The month and a half before her arrival was of intense anticipation for me. I did feel this way a few times again later when she was away with our sons in the US or Bangalore for several months, but those times I never felt as intensely as I did in May–June 1965. When she arrived in June, I had already submitted my thesis and was completely free of any work tensions.

It was summer and the weather was not at all cold. The days were long with the sun shining even at 9 p.m. in the night. The fact that for two days around 21st June it didn't get dark at night and only grey surprised Bhavani. There were a series of get-togethers at the homes of N.B. Menon, Chandran and Thankedathi. The first time I went to Chandran's house, his wife Ella and their cute three-year-old daughter Karina were there. V. Govindankutty, P. Govindankutty and C.N. Parameswaran were there too. So obviously all of us were talking in Malayalam, while Ella was busy in the kitchen. Karina, after listening to our conversation for a few minutes said, 'Uncle, what are you talking about? You sound like a tin

full of pebbles being shaken.' Years later, someone else too said exactly the same thing. I wondered if Malayalam sounded like that because it is full of consonants.

In August, we went to visit a number of Russian cities like Leningrad, Riga and Kiev. Everywhere, food was a problem for my wife. She was a strict vegetarian and wanted rice and curd, but no hotel would serve these. We were in Leningrad on 15th August, Indian Independence Day, and participated in a function hosted by the Indian consulate. Together we visited the Hermitage, one of the most wonderful museums of the world, which was impossible to see in one day. Earlier in Moscow, we had visited the famous Tretyakovsky Art Gallery. The rocket boat ride in the Neva River was a thrilling experience.

From Leningrad we went to Riga, where Yuri Slogat offered to show us around. We went to the Baltic Sea coast with him. Earlier, when I had gone there in December 1962, the water was frozen and I could walk on it. There is even a photograph of me sitting on the sea. The trip to Kiev was a bit troublesome as Bhavani vomited continuously due to airsickness. Here too there was a friend to show us around. Taking boat rides in the Dnieper River, passing through a lock, enjoying a funicular drive to the hilltop—all these were first-time experiences for us.

We returned to Moscow by the end of August. Signs of autumn had already become visible with the leaves having changed colour. In fact, autumn was more colourful than spring. That year, winter set in early in October. There was heavy snowing, and all the roads and trees were covered in white. It was wet and slippery everywhere. Thus, in just four months we, especially Bhavani, experienced three seasons—summer, autumn and winter—in all their splendour in the USSR.

I defended my thesis on 22nd October, one week before our fifth wedding anniversary. We returned to India in the first

week of November 1965. That was 49 years ago. After that, I never had any opportunity to visit the Soviet Union. However, later, I visited a large number of countries, though mostly on my own.

Some time in September 1965, my wife and I were travelling by a taxi in Moscow. The taxi driver was a woman of about forty who wanted to talk to Bhavani. Russians had a special affinity to Indians, thanks to Raj Kapoor, and the driver liked to talk, so I acted as an interpreter. She asked my wife to persuade me to translate a particular book from Russian to Malayalam. The book she so vehemently promoted was *Pedagogeecheskaya Poema* (A Pedagogic Poem) by Anton Semenovych Makarenko. I had read the book earlier, which was a masterpiece on education talking about Makarenko's experience in establishing a colony to rehabilitate 'delinquent children' in the post-revolution years. His other books on education too were valuable guides to educators.

I was wonderstruck that a taxi driver we had incidentally met was recommending such a serious book to us. In fact, after that I did translate the first chapter of the book straight from Russian to Malayalam, but couldn't go further for want of time. Even today, I feel like completing the translation. The English translation could be useful to have today, but I have forgotten much of my Russian. Those days, I enjoyed reading Russian classics in the original. *Voina ee Mir* (War and Peace) and *Anna Karenina* by Leo Tolstoy, *Hozhdenyo Po Mukaam* (Road to Calvary) by Alexei Tolstoy, *Povyest Nastayasheva Chelovyeka* (Story of a Real Man) by Boris Polevoi, *Kak Zakalyalas Stal* (How the Steel Was Tempered) by Nikolai Ostrovsky, and *Iskaateli* (The Research Workers) by Daniel Granin were some of the books I really liked. I had brought back scores of Russian novels to India for reading in my leisure time, which I did not find.

Culinary Excursions

There was a kitchen with stoves and ovens and free gas, and breakfast and dinner had to be cooked daily. So, naturally, one was tempted to conduct experiments in the hostel. Pancakes made with wheat flour, milk and sugar was one such experiment. As was the gulab jamun made with milk powder. There were others too. Carrot halva was a common weakness. The five of us, Chourasia, Rao, Bhat and Ramamurthy and I, would make it together. Six kilogrammes of shredded carrot, twelve litres of milk, three kilogrammes of sugar and one kilogramme of ghee—that was the recipe. It would take four to five hours, and in the end, we would get eight kilogrammes of delicious carrot halva, comparable to that made by professionals.

We also used to make *rasgullas*. Often, they would turn out to be ‘*rasgolis*’, hard enough to be used as bullets! We succeeded to get the spongy texture of the *rasgulla* only on less than half our attempts. There were Bengali women around, so we asked them what the trick was to make them spongy. They very philosophically told us that there is no guarantee with a *rasgulla*: sometimes it comes out right and sometimes it doesn’t. I knew there was a method to always get it right, but I didn’t know it. I had, however, made it a point to make *rasgullas* when milk curdled, which is not too infrequent a phenomenon. Earlier we used to throw away split milk and even now, most people do so. In the early years of *Eureka*, the Kerala Sasthra Sahithya Parishad children’s magazine, I wrote exhorting children to celebrate when milk curdled and ask their mothers to make *rasgulla* out of it instead of throwing it away.

The masterpiece of our culinary inventions was the *gongura* chutney. *Gongura* chutney is a typical Andhra style pickle, which is hot, sour and oily. It is made with the sour leaves of the jute plant. In Moscow, occasionally one got laurel leaves,

which were quite sour and used in very small quantities to add sourness to soup. When a consignment of laurel leaves arrived at the shop, we would go there and purchase several kilogrammes of it. The shop girls would be very puzzled by these large quantities that were sufficient to make thousands of litres of soup. We used those leaves in exactly the same way as we used jute leaves. We used to have a stock of chilli powder, asafoetida, fenugreek and other spices from India, and we would use rapeseed or sunflower oil in place of mustard or sesame oil. More often than not, the chutney would turn out quite well.

Fried tender potato was another delicacy that we invented. In the beginning of the new season, one could buy very tender potatoes at a higher price. All one had to do was wash and fry them. The skin of the potatoes would be very tender, so they had to be fried in rapeseed oil and not ghee. Mr Phadke from Ahmedabad was an expert in making these.

Though the bulk of the land in the USSR had been collectivized and later nationalized, the old collective farm members had been given small plots of land where they could cultivate anything and sell the produce in *kolhoz*—collective farm—markets set up in different parts of the cities. Moscow had its own *kolhoz* markets, one of which was only two kilometres from our institute. When the new season began, fresh vegetables and fruits would come into the *kolhoz* market a few weeks earlier than the regular shops. There were a variety of Georgian green chillies sold there that were unimaginably hot. If one of these chillies was broken in half, its hot odour could reach someone standing dozens of metres away. These used to be very costly, one rouble for one chilli. There were less hot chillies too, and we would normally buy those. In *kolhoz* market, they also sold horse gram, but it was not very clean. Once I was buying half a kilogramme of a particularly

dirty batch of horse gram from a *babushka* (grandmother), who asked me: 'Son, who is going to clean this for you at home?' Visiting a *kolhoz* market was like witnessing a scene from ancient rural Russia. It was exciting to roam around, look at all the fresh produce and listen to the sellers and buyers bargaining with each other.

'When in Rome, do as the Romans do.' Or, as they say in Malayalam, 'In the land of snake eaters, demand the middle portion.' In the company of Russians, I tried never to stand out. I would eat everything they ate and drink everything they drank, and enjoy doing it. I have consumed substantial quantities of vodka. Once I drank more than half a litre of the stuff during a dinner that stretched for about six hours. There is one brand of vodka, distilled with green chillies, which is very hot and is consumed regularly by the Russians to fight cold. I was game for it, too. Of course, Russian champagnes are really delicious. They say that they can stand up to the best French champagne. I am no connoisseur, but Black Eyes (*Cheorniy Glazi*) was one of the best Russian wines I tasted. I had thoroughly enjoyed all the other wines too.

We used to get frozen vegetables—capsicum, ladies finger, carrot, etc.—from Bulgaria. Bulgaria was seen as an agricultural backyard by the Soviets who never helped them industrialize. One could see a pan-Russian chauvinism developing everywhere in the country. There were many standard Russian jokes about Armenians, which the other nationalities never liked. When we visited Riga for the first time in December 1962, we asked some local shopkeepers about things that were good, so we could buy them. They said: 'Nothing Russian is good. Don't buy anything.' Another young person who joined us during a walk was so critical that he would spit on the ground every time he said the word 'Russian'. None of the other nationalities liked the Russians.

There was a sort of narrow Russian nationalism pervasive everywhere, which was very antithetical to socialist internationalism. This nationalism, together with the absence of democracy, on the one hand and the idea of development borrowed from capitalism on the other, could have been responsible for the downfall and dissolution of the Soviet Union. China, of course, outsmarts everybody else in narrow nationalism, with not even an iota of internationalism. Otherwise, the Sino-Indian border dispute would have been resolved ages ago. If they had not intervened opportunistically, the Indo-Pakistan rift on Kashmir too would have been resolved. Together with the US, they too want border disputes and wars to persist so that they can cash in on it. Perhaps the antidote to narrow nationalism is not the mantra of internationalism, but a combination of economic localism and cultural internationalism, that is, the entire world as a large network of horizontally interconnected economies.

Thus, when I returned from the Soviet Union, I felt that we should build socialism in India, but not of the Soviet variety. Perhaps of the Gandhian variety? May be there is something in the Gandhian concept of socialism, where control over assets is less important than control over one's own mind.

Proletarian Culture

There was a particular event that deserves special mention. Close to our institute, there was an area called Baumanskaya, populated mostly by industrial workers. Russians were crazy about Indian cinema, especially Hindi cinema. More people knew Raj Kapoor there than Jawaharlal Nehru. Many had seen *Awara* (*Bratya* in Russia) several times. The cinema theatre in the Baumanskaya area was showing the Hindi film

Sujata dubbed in Russian. I had seen the Hindi version earlier. Thinking that it would be interesting to hear Sunil Dutt and Nutan speaking Russian, I went to see the matinee show.

Russians were film addicts. For a long time, they held the record for highest per capita viewership in the whole world. Tickets were cheap, going from thirty kopeks up to seventy kopeks. The costliest were not the back rows, like in India, but the middle rows. Most of the theatres were always full. Other forms of art—music, opera, ballet—were much more expensive, ranging from three to ten roubles. The Palace of Congress in Kremlin was a huge hall, which could accommodate about five thousand spectators. I had the fortune to see the greatest ballets, *Sleeping Beauty*, *Swan Lake*, *Fountain of Bakshisarai*, and many others there. The ticket cost ten roubles and I had to purchase them two or three weeks in advance. Often I had to resort to pretending that I was part of a visiting delegation, etc. At the older and more famous Bolshoi Theatre, the house of the greatest ballerinas, the Moscow Opera Theatre, tickets would be sold out many months in advance. Cinema was the only place where one could get tickets on the spot.

So, when I went to see *Sujata* in Baumanskaya, there was a long and appreciative applause from the audience at one point, which did not make any sense to me. It was during a scene in which Nutan playing *Sujata* walks along a long corridor carrying a cup of tea on a tray to the visiting hero, Sunil Dutt. There was nothing special about this scene. There was no dialogue, no action, just soft music playing in the background. I asked the person sitting next to me, '*Shto Sluchelus?*' What happened? He looked at me strangely and said, 'You don't know? This is Tchaikovsky's Sonata Number such and such.' He told me the number, but I don't remember it now. Music director Salil Choudhry had used Tchaikovsky's music in the film and the ordinary working class in Moscow recognized

and appreciated it. That was how Lenin proved his point that proletarian culture was not a rejection of the ancient, often feudal, arts but its assimilation by the proletariat. In no other country, ordinary citizens would have been aware of their legacy in the arts, music, painting, ballet or opera. I thought about the tragedy of the Kathakali dance and classical music in Kerala. How many understand and appreciate them? Unfortunately, I don't either.

My first organisational experience was as the ESP (so they called me)—Edavazhi Sangham (Street Boys' Association) president. There were half a dozen boys in my street in Thrissur, who formed a team for football matches and more importantly, for organizing the annual Durga Pooja. Later, I became secretary of the Electrical Engineering Association in the Trivandrum Engineering College. And now, I became President of the Indian Students' Association in Moscow.

Development of Political Ideas

I have seen socialism in practice. I have seen two great socialist nations, the Soviet Union and China, positioned antagonistically. I have seen different nationalities in the USSR being inimical to the Great Russian Chauvinism. I have seen the silent, and some times not so silent, anger of the European socialist countries—Bulgaria, Romania, Hungary, Poland, Czechoslovakia and Germany—against the over-lording of the USSR. I have also seen the degeneration of the communist morals of Party members in the USSR, the gradual distancing of the people from the Party and even from Marxism, and the problematic path of state capitalism clothed as the dictatorship of the proletariat, trying to surpass the Americans. I have seen the growth of consumerism in the USSR inadvertently

or mistakenly promoted by the Party, equating unconditional abundance with communism.

I could already sense the impending collapse of the socialist system during 1962–1965. When I asked comrades in the USSR to consider a grand USSR, including China and East Europe, they were unsure. If all of those countries came *under* the USSR, then they were for it. But they were not ready to give proportional representation. Nationalism was an intoxicating potion.

Those days it was customary for communist parties to speak of four contradictions. These were:

- between socialism as a system and capitalism as a system, that is epochal contradiction;
- between the working class and capitalists in non-socialist countries;
- between imperialism and colonial countries, that is, focal contradiction; and
- among imperialist countries themselves.

The contradiction among socialist nations was not mentioned anywhere. I tried to bring this to the notice of EMS when he visited Bombay in January 1968. He explained that the inter-socialist contradiction was not antagonistic, while others were. A few years later, however, he admitted that even non-antagonistic contradictions left unattended for a long time could turn antagonistic.

I felt that the hangover of bourgeois nationalism was the villain of the piece. The word patriotism could be easily distorted into enmity with other nations. Could we in India get over this narrow sense of nationalism? In trade within socialist countries, the USSR dictated the prices, which made the other nations unhappy. They saw that there was a net flow of surplus

value across their borders towards the Soviet Union. Trade across the border of any two countries, which is protected by the army, would be disadvantageous to the weaker country. It was several years later that I read Che Guevara's speech at Algiers in 1964, accusing the USSR of using the market to their own advantage in the same way as the capitalists, and warning it of the consequences.

Cross-national trade was always a source of antagonistic contradictions. Even within the Soviet Union, there were tensions. There were dozens of nationalities and sub-nationalities. Given freedom, many would have seceded long back, and at the first opportunity they did. How could we in India overcome this problem of nationalism? What was the rational basis for the contradiction? Unequal trade relations imposed with the help of authority or power? That forced unions wouldn't do any good we saw in the USSR, and we can also see this in Kashmir and in Nagaland. Perhaps the best way is to deconstruct the concept of nation.

I believe that Gandhiji's concept of self-reliant village republics is a good tool to deconstruct the nation-state. Deconstructing the so-called national economy into a network of local economies networked horizontally, in Gandhiji's own words, like 'grand oceanic circles', can be useful. It will reduce the quantum of alienating trade. More and more producers and consumers can be brought nearer one another. In place of production for exchange, production for consumption will gain predominance. There will be no massive unidirectional flow of commodities and surplus values. Strengthening the local economy will have a positive political fall-out: it can strengthen democracy. Local politics will become more decisive and more and more people can participate in running the affairs of the society. Politics can be freed from the exclusive domain of political parties and will be open to all citizens.

Strengthening the local economy demands bolstering the local production base. This in turn demands substantial upgrading of knowledge and skills, and also of technology so that more and more local raw materials can be converted into necessary products. This requires development of new and appropriate technologies and a change in the research and development agenda per se.

Strengthening the local economy and making villages or groups of villages as self-sufficient as possible has added advantages. It reduces transportation of goods as well as the movement of people necessitated by work. It helps to build a more well-knit and coherent community. It builds thousands and thousands of forts of resistance against the onslaught of the global economy and the global market. It helps to consciously develop increasingly socialistic local societies, which at a later stage can coalesce and overthrow the exploitative capitalist system.

All of these ideas were expressed in a rather long article that I wrote in the *Chintha Weekly* special issue of 1974. Three decades later, in 2003–2004, most of the ideas that were voiced in that article came to be known as the Fourth World Theory.

The fall of the Soviet Union, the failure of the socialist experiments and developments in the past two decades in these countries prove clearly that the socialism of the twentieth century was faulty. A revised experiment has to be conducted. I see the total literacy campaign, basic education campaign, people's plan campaign, resource mapping, decentralization, etc., as elements leading to a new experiment. Citizens have to leave the viewing galleries and enter the field and play the game of politics. They can form neighbourhood groups and start exerting influence.

Back in India

A Long List

My wife and I returned to India in November. I had not forgotten the idea of building a movement for promoting scientific literature in Indian languages. In fact I had brought with me a long list of things to be done in India. It was indeed an action plan for a lifetime. Among other projects, the list contained the following:

- To build an all-India movement for developing and disseminating scientific and technical literature in all Indian languages.
- To take direct responsibility to initiate this in Kerala and Maharashtra.
- To start an ambitious programme of translating scientific and technical books from Russian to English.
- To translate selected novels and writings by twentieth-century Russian writers like Anton Makarenko (*Pedagogicheskaya Poema*), Nikolai Ostrovsky (*Kak Zaklyalas Staal*), Boris Polevoy (*Povest Nastoyasheva Chelovyeka*), Alexi Tolstoy (*Hozhdenie Po Mukaam*) and Daniil Granin (*Iskateli*) into Malayalam (I had read all of them in Russian and thoroughly enjoyed the experience).

- To make India ‘a paradise for children’ as it was in the Soviet Union.
- To save the Indian communist movement from the kind of degeneration visible in the Soviet Union.
- To transform ‘formal democracy’ into real participatory democracy.
- To have a long-term agenda for educating people in science and technology and rooting them in a scientific temperament, without which real democracy is not feasible.

On arrival in Thrissur, I met my cousin M.C. Vasudevan who was then the manager of Mangalodayam Publishers that had published both my books, *Isotopes and Radioactivity* and *Paramanu Sastra*. I shared with him the idea of setting up an organization for promoting scientific literature in Malayalam. He told me: ‘Unni (which is what I’m called at home), there is no need for it. Such an organization already exists by the name of Kerala Sasthra Sahithya Parishad (KSSP). Its leading figures are P.T. Bhaskara Panicker (PTB), M.N. Subramanian (MNS), Konniyoor Narendranath and Dr K.G. Adiyodi.’ MNS was a colleague of my father’s youngest brother, Vishnu Namboodiri (we cousins used to call him Kunhaphan) at St. Joseph’s High School, Calicut. My cousin asked me to go there and meet him. This was the first time I heard about the Parishad.

Within a week of this conversation, I went to Calicut with Kunhaphan who introduced me to the man who was known as the ‘walking encyclopaedia’ to his colleagues in St Joseph’s High School. MNS was the treasurer of the KSSP. From him I got a glimpse of what it had done and what it couldn’t do in the past four years since its inception in 1962. I learned that the vice-president of the KSSP, Konniyur Narendranath, was in Calicut, working with the All India Radio. MNS also told

me where PTB lived. I went to All India Radio (AIR), met Narendranath and shared my dreams with him. He gave me the address of K.G. Adiyodi, the secretary of the KSSP, who was living in Veli, Trivandrum.

Within a week I went to Ottappalam to meet PTB, who lived two or three houses down from my cousin M.N. Namboodiri's home, who worked at the Ottappalam branch of the Life Insurance Corporation. When I went to his house, PTB was out, and so I left a message with his wife explaining who I was, why I had come to meet him and left my address in Thrissur with her. Around a week later, I saw a fair middle-aged man, wearing a folded dhoti and holding an umbrella in his hand, opening our wicket gate. Meeting PTB for the first time was quite momentous for me. Instead of staying at home to talk, the two of us walked down to CMS High School and found a place to sit. There PTB narrated the difficult journey of the KSSP till then: how they had failed to persuade newspapers and weeklies to have a regular column for science, how their attempt to publish books in the Penguin Science News format could not go beyond one issue, how their dream to translate and publish Darwin's *The Origin of Species* had remained a dream, and so on. Bent upon moving forward, I suggested that the KSSP publish a periodical on its own that is exclusively devoted to science. To begin with, it could be a quarterly. I also ventured to promise that in Bombay, I would organize a branch of the KSSP, collect 100 annual subscriptions and also ensure a regular flow of articles for the periodical.

During the third annual conference of the KSSP held at Ottappalam, the decision for the publication of a quarterly science journal, *Sastragathi*, was taken. The annual subscription, which would include four issues, was set at six rupees. I kept my promise and managed to collect 100 subscriptions as well as four articles, including the lead article in the first issue. Since then,

Sastragathi has been published regularly. In the mid-seventies, its frequency was increased from a quarterly to a monthly. Initially, *Sastragathi* was being printed at Mangalodayam Press and A.K.T.K.M. Vasudevan Namboodiripad, who owned it, was quite lenient with the payments. M.C. Namboodiripad, who had by then become an established science writer, was the first editor.

SSP(M), Bombay and FILSA

The Sasthra Sahithya Parishad (Malayalam), Bombay was formed in January 1966. It was centred around scientists in the BARC. To begin with, there were about sixty members, which was more than the total membership of the KSSP in Kerala. I was the president, Dr A.D. Damodaran was the vice president, V.C. Nair was the general secretary and Dr T. Sesha Iyengar was the treasurer. To make the unit dynamic, we decided that we would meet every month and one of us would present a scientific paper in Malayalam so as to train ourselves to write and speak in Malayalam as well as understand what we hear. It also had an organizational purpose.

The date we chose for these meetings was the second Tuesday of every month. There was a reason for this selection. The first Monday and first Thursday were considered auspicious according to some custom, whereas Tuesdays and Fridays were supposed to be inauspicious. The second week had no auspiciousness attached to it. Selecting Tuesday was a sort of ‘rationalist’s rebelliousness’. Today, however, we all understand the irrationality of such rebelliousness. Mechanical rationalism never achieved anything—mechanical opposition is also irrational. Anyway, having these meetings on the second

Tuesday became an accepted norm and was later also adopted by the KSSP.

As months went by, the attendance at these meetings dwindled from thirty or forty people to eight or ten. Realising that something had to be done to change this, I took two weeks' earned leave from the BARC and started a door-to-door campaign. I went to each and every member's house, spent some time with them and invited them for the next meeting. I would invariably end up drinking tea or coffee at their house and sometimes even eat with them. That they had given me something acted as a binding force. Just like the mass lost by nucleons in an atomic nucleus acts as binding energy: you give, you are bound. Many years later, when people asked me what held a KSSP member to the organization year after year, I would give the analogy of the binding energy of nucleons in an atomic nucleus. The more a member gave to the organization, the stronger the bond became. The experiment was a success and for the next meeting about thirty to forty people turned up. Since then, for the next few years, the second Tuesday meetings went on without interruption and attendance was fairly steady.

The SSP(M) was registered as a charitable trust under the Societies Registration Act since its inception, whereas the KSSP was even then an unregistered organization. The fourth annual conference of the KSSP was to take place in Thrissur on 13th May 1967. It was to be a one-day conference and I was to go to Thrissur on earned leave to organize it along with T.R. Sankunny of the Veterinary College. It was also decided that it was time for the KSSP to be registered, and a Memorandum of Association and byelaws were to be approved at the conference. There were no units at the district, block and panchayat levels and there were only about forty members across the state.

The venue for the conference was the recently constructed Regional Theatre. No rent was to be paid, but we needed money for mike, tea, meals, notices, etc. The responsibility of raising this money fell on Sankunny and my shoulders. The experience of donation collection was, as usual, bitter and sweet. We had a set donation collection route, from Thrissur to Cherpu and back. Chittoor Kunhan Namboodiripad, Dr V.R. Menon and others were some of the regular 'victims' on that route. Around mid-noon we reached Dr V.R. Menon's house and were welcomed with a shower of abuses. Mrs Menon advised us, 'You are young. Instead of wasting your time and troubling others, why don't you go to Bihar and do something to help the starving people there?' Bihar was at that time suffering from a famine. In the end, however, we managed to collect Rs. 625. The total expense of the conference came to Rs. 600 and the surplus of Rs. 25 was handed over to the new secretary, Professor A. Achuthan.

In the morning session, I presented a paper titled 'The Problem of Technical Terms in Malayalam'. I was quite conversant with the issue because while in Moscow, I had compiled a few thousand English and equivalent Malayalam terms. The principle I adopted was the same as recommended by the Central Hindi Directorate:

1. International words like units of weight and measurement, terms based on proper nouns, terms already absorbed into the language, scientific names of new elements, compounds, binomial nomenclature, etc., are not to be translated, only to be transliterated.
2. Faithful reflection of the true meaning and conceptual accuracy rather than translation of the root meaning.
3. Pan-Indian vocabulary as far as possible.

The methods involved using suffixes, prefixes, compounding, and at times giving new meaning. I added one principle of my own that was not there in the Hindi glossary, but was used in the Gujarati glossary made by the Gujarati Research Society in 1938. I believed that at times, one is forced to use English verbs as they are. One integrates them into Malayalam using an auxiliary verb, which is not the case in most other languages. The Latin root *agit* is *agitare* in Latin, *agitieren* in German, *agitate* in English and *agitirovat* in Russian. In Malayalam, it would not be *agitate cheyyuka*, but *agituka* from which the past tense *agiti* is derived and the future tense *agitum*. To pump would be *pumpuka*, to develop would be *developuka*, and so on.

This suggestion invited a spirited attack. Kurumappilly Kesavan Namboodiri was particularly virulent in his attack that went on for forty-five minutes, while the paper presentation took only thirty minutes. Ultimately PTB, who was presiding, had to intervene. Later, K.K. Namboodiri wrote an article attacking my principle and complaining that he was not given time to speak. Poet Vishnu Narayanan Namboodiri wrote a rejoinder to the article in the same magazine. I did not know Vishnu at that time, but later we met and became close friends.

In the afternoon, we had the regular business session. Out of the forty members, only thirteen attended this session. N.V. Krishna Warriar (NV) was the chair. I presented the draft Memorandum of Association and byelaws that I had prepared earlier based on what we had in Bombay. It was adopted after discussion and amendments. P.T. Bhaskara Panicker was elected the president, NV became the vice president and Professor A. Achuthan became the secretary. There was no separate treasurer at that time. One major decision taken at that meeting was to compile a comprehensive glossary of technical

terms in Malayalam. The job was split into two groups. The Bombay group would do words starting from letters A to K and the Kerala group from letters L to Z. NV agreed to publish samples in *Mathrubhoomi Weekly*, which he did in the 13th September issue in 1969. This work was made use of later, in 1969, by the State Institute of Languages.

Towards the end of 1967, I was staying with Dr A.D. Damodaran as both our wives had gone to Kerala to give birth. Damodaran had a cook, and so it was convenient for me to move to his house. Once E.M.S. Namboodiripad, whose daughter Damodaran had married, came and stayed with us. He was the chief minister of Kerala then. I was at that time busy completing the Bombay half of the Malayalam glossary and also writing some books. He asked me how we were planning to publish it and I said I had no idea. He suggested that the CPI(M) could publish it if it would not get us into trouble with the authorities (atomic department is a strategic one and communists are suspect). A few months later, when Dr Trigun Sen became the central education minister and offered a grant of ten million rupees to each state to develop university-level textbooks in languages other than Hindi, I wrote to EMS asking for his help to publish the glossary. He told me that the government was contemplating setting up a special institute for this purpose and asked me to get in touch with Education Minister C.H. Muhammad Koya. The fifth annual conference of the KSSP was held in Trivandrum under the stewardship of Dr S. Parameswaran. A beautiful book with a powerful cover was brought out on the occasion. I had contributed an article outlining an ambitious programme to publish 5,000 science books in Malayalam.

The State Institute of Languages, Kerala was set up in September 1968 with NV as the director. I promptly sent a

note to him suggesting an ambitious programme. He asked me to join as assistant director of technical sciences and implement the programme. I wrote back saying that if the state government could request my deputation, I was willing. This was in January 1969. Within a month, all the paper work was completed and I was relieved from the BARC in March.

The Atomic Energy authorities were quite happy to get rid of me because I had become a headache for them. I had been successful in forming an officers' association in the BARC (BARCOA) and in persuading the BARC Director H.N. Sethna to be its president with me as secretary. The BARCOA neither wanted more pay nor housing. It demanded meaningful research, an end to unhealthy interdepartmental competition and a say in the research agenda of the BARC. These demands couldn't be accepted, but they couldn't be rejected either. I had been doing other things too, which Dr Gopala Iyengar, the director of the biology group, termed mischievous. I advocated mother tongue as the medium of education up to the highest levels and the development of scientific literature in all languages. I was a thorn in the side of the authorities and so, they were immensely willing to process my deputation papers post-haste.

Dr C.S. Karve was the principal of Khalsa College, Bombay, and a well-known popular science writer in Marathi. I approached him in February 1966 with the idea of a movement for large-scale promotion of science literature in Marathi. He told me that they were already engaged in the formation of such an organization and directed me to Madhukar N. Gogate, a practising architect and Professor B.S. Barve, who taught chemistry in Wilson College. I met and apprised both of them of the KSSP's activities and also took part in some of their preparatory meetings. The Marathi Vidnyan Parishad was

formed in April 1966, with Dr R.V. Sathe as the founding president and Mr Gogate as the founding secretary.

The BARC had the highest density of scientists and technologists in any one institute. In 1966, I called a meeting of some senior scientists representing various language groups in the Tata Institute of Fundamental Research (TIFR). In that meeting, Punjabi was represented by Professor Yash Pal, Kannada by Dr M.R. Srinivasan, Telegu by Dr N.K. Rao, Tamil by Dr R.R. Daniel, Gujarati by Dr S.H. Divetia, and Hindi by Dr Kamath. Dr Krishnankutty, Dr Divakaran and a few others also participated. I acquired a list of all the scientists, both assistants and officers, in each department and classified them according to their mother tongue. Soon I had lists containing hundreds of names of Tamil, Telugu, Kannada, Gujarati, Hindi and Bengali speaking scientists. The number of Assamese, Punjabi and Oriya speaking scientists was, however, a bit low.

The next step was to infect a few from each group with the idea of popularizing science, which turned out to be a success. With their active support, each language group was called separately to discuss the formation of an organization for science. Soon we had the Kannada Vijnana Parishad, Sastra Sahitya Parishat (Telugu), Bombay Tamil Vinhana Valarchi Kazhakom, Hindi Vigyan Parishad and Gujarati Vigyan Parishad. In the beginning of 1967, the idea of an alliance of all these organizations was mooted and the Federation of Indian Languages Science Associations (FILSA) was inaugurated in the Khalsa College auditorium by Dr P.B. Gajendra Gadkar, Chief Justice of India. It was a colourful and exciting function. Dr R.V. Sathe, Vice Chancellor of Pune University, was elected the president with M.N. Gogate and I as secretaries. The FILSA is actually a forerunner of the All-India People's Science Network. During the next two years, the FILSA organized

a number of seminars and translated four books into several Indian languages on behalf of Somayya Publications.

* * *

Though Professor Yash Pal could not get enough people to form a Punjabi Vigyan Samiti, he became my lifelong friend as well as of the KSSP. Our friendship was strengthened because of a common friend, Dr P.R. Pisharody, who was also one of my mentors in Bombay. He retired as director general of meteorology and his youngest brother-in-law was my classmate. Both Yash Pal and Pisharody were members of the Indian National Commission for Space Research (INCOSPAR), the predecessor of the Indian Space Research Organisation (ISRO). Pisharody went to the Physical Research Laboratory, Ahmedabad after retirement, while Yash Pal went to the Satellite Application Centre (SAC), Ahmedabad from the TIFR. Yash Pal invited me to the SAC to give a talk on the KSSP and to persuade the KSSP to start a low-cost television studio and flood the market with programmes on science. Television was just coming into the scene and Doordarshan was thirsty for programmes. Yash Pal believed that if the KSSP did not take the lead, others would steal the show with soap operas. The KSSP could not take the lead, and it is difficult to say what would have happened if the KSSP had been bold enough to take such an initiative. All that it managed to do was help two activists, G. Sajan and Mohan Kumar, to enrol in the Film and Television Institute of India and Jamia Millia Islamia, respectively. During these years, the media scene changed beyond recognition.

In Ahmedabad, I was staying with Pisharody, who drove me to Yash Pal's house. 'I'm only his driver,' Pisharody said jokingly to Yash Pal. Decades later, Yash Pal and I went to visit

Pisharody in Poona. At that time, Yash Pal told him, 'This time I'm the driver.'

This friendship with Yash Pal remains strong till today. I translated his book *Random Curiosity*, which for me was an act of love and respect towards him. While he was secretary at the Department of Science and Technology (DST), we met frequently. When the KSSP organized an All-India Jatha in memory of the Bhopal tragedy victims in 1985, he happily donated Rs 45,000 towards the effort. In 1990, he was the chairman of the University Grants Commission (UGC), while I was the secretary of the Bharat Gyan Vigyan Samiti (BGVS). He was part of the Literacy Mission Council and offered the BGVS 150 UGC fellows to work for literacy. College teachers were allowed to become UGC literacy fellows with the support of the Faculty Improvement Programme. The teachers worked for literacy and the UGC paid their salaries. However, we couldn't persuade many teachers to join us because literacy work was more strenuous than college or university teaching. We never got more than twenty-five teachers at a time. Anil Bordia and Laxmidhar Mishra had given me free rein to select the teachers. I had wanted one person in particular, Dr Venkatesh Athreya, to join us as a UGC fellow. For many reasons, however, he did not accept our invitation.

When Yash Pal's term as the UGC chairperson got over, he continued to be associated with the BGVS. The programme Mass Action for National Regeneration (MANAR), which later led to the registration of an organization called the Bharat Jan Vigyan Jatha (BJVJ), was originally conceived by him. He had visited the KSSP office several times in Pattoor, Trivandrum. We were rather unbothered about cleanliness, and when he saw the floor strewn with litter and the walls covered with cobwebs, he exclaimed, 'Is this the way to keep the office of a science organization? This is really bad.'

When I was studying in the Namboodiri Vidyalayam, there were a few famous quotations written on the walls of the school, one of which was *Vidyadhanam Sarvadhanal Pradhanaam*, that is, knowledge is the most important wealth. My own experiences force me to modify this to *Suhrud Dhanam Sarvadhanaal Pradhanaam*, that is, friends are the highest form of wealth. I had a very warm relationship with many good people like P.R. Pisharody, K.R. Narayanan, Krishna Kant, Yash Pal, M.G.K. Menon, A.P.J. Abdul Kalam, B.M. Udgaonkar, M. Vijayan, and others. I have a large number of friends among bureaucrats and politicians too. Resigning from the BARC was not a sacrifice, but good business! I am a rich man, with a wealth of friends.

A SILK-en Net

I joined the SILK (State Institute of Languages, Kerala) and took charge as assistant director of technical sciences. Besides me, there were three other assistant directors, Dr K.P. Karunakaran (social sciences), Professor C.K. Moosad (physical sciences) and Dr A.N.P. Ummerkutty (biological sciences). P.A. Warriar was the head of the language division. Later, Professor S. Guptan Nair joined as the assistant director of languages. It was there that I met C.P. Narayanan for the first time, who is now a Rajya Sabha member and was a research officer in physical sciences at the SILK then. He had been running a journal called *Yuva Bhavana* and had once asked me to submit an article, on NV's advice. CP and NV were a founder members of the KSSP. The ensuing years saw some intense collaboration between the KSSP and the SILK.

PTB too had shifted to Trivandrum as the editor of *Viswavyajana Kosha* to be published by Sahitya Pravarthaka

Sahakarana Sanghom. T.K. Kochunarayanan, who had just completed his masters in mathematics, joined him as an editorial assistant. Together, they took up the responsibility to publish a second periodical, especially targeting high school children, as part of the KSSP. Thus, *Sastrakeralam* began to be published as a monthly from June 1969 onwards. *Sastragathi*, the official organ of the KSSP started in 1966, was by and large targeted at a general readership.

Production of university-level textbooks up to the highest level, including professional courses like engineering, medicine, agriculture and law, was the declared objective of the SILK. Books like *The Feynman Lectures on Physics*, a standard physics textbook for degree and post-graduate students; the Bourbaki series for higher mathematics; and *Strength of Materials and Theory of Elasticity* by Stephen Timoshenko were some of the standard textbooks that were translated.

Besides the production of textbooks, the SILK wanted teachers to practise teaching in Malayalam even in professional colleges. Several workshops were held in engineering colleges and other colleges for this purpose. In the meantime, the Thrissur district committee of the KSSP came up with a novel idea of organizing a ten-day course for students who had just appeared for the SSLC. The objective of the course was to familiarize them with some of the important topics they would be studying in the years to come to effect a smooth transition from school to college, and also give them a flavour of the social and scientific relevance of what they were going to study. The course was held at the Government Training School in April–May 1969. The best teachers from the city colleges came to teach the children.

One day, Mr Abraham of St Thomas College was transacting a lesson on the polarization of light. There was an unusual student in the class, EMS Namboodiripad, who had

just resigned as chief minister of Kerala. He was sitting in the last row so as not to divert the attention of the students and teacher. At the end of the lecture, he told the students that if physics had been as interesting as this when he was in school, he would have studied the sciences instead of the arts. Since then, this programme, which was at that time christened as the 'foretaste course', was picked up by other districts and local units too under the general title of 'enrichment classes'. Even now, the classes are taught every summer in some of those places.

The sixth annual conference of the KSSP was held in June 1969 at Calicut. The KSSP already had two publications, *Sastragathi* for post-SSLC students and the general public, and *Sastrakeralam* for high school students. The idea of doing one for primary children was raised at the conference, and it was decided that the KSSP would start publishing a science monthly for upper primary school children. This publication came to be known as *Eureka*. T.R. Sankunni was to be the editor and the Thrissur district committee was to take the responsibility to bring it out. By that time, *Sastragathi* had been shifted to Calicut. The first issue of *Eureka* came out in June 1970, which soon became the KSSP's most popular monthly, and later, fortnightly.

The concreting of Idukki Dam was to be inaugurated by Indira Gandhi some time in May 1969, but the monsoon started early that year, and so concreting began in April itself. Indira Gandhi was to arrive in Kerala in May anyway, and to make her visit worthwhile, PTB suggested the release of two glossaries on natural sciences and social sciences, which would be prepared by the SILK. The chief minister and the director of SILK agreed. This was decided in March and the only work done on the glossaries was the initial set of terms prepared by SSP(M) Bombay. Thus, a hectic work schedule

started. The day would start at 9 a.m. and would go on till 9 p.m., after which NV would drop all of us off at our respective homes before going home himself. We managed to finish the manuscripts of *Vijnana Sabdavali* and *Manavika Sabdavali*, but the government press did not manage to print them on time. So, Indira Gandhi had to release the partly finished books, with the remaining pages left blank. However, this task set the pace and working style of the SILK.

I Join the Communist Party of India (Marxist)

In 1967, the government of Kerala organized a major four-day seminar on the Fourth Five-Year Plan. The SSP(M) Bombay contributed two papers to it, one on science and technology and the other on education. Besides me, the other contributors were Dr A.D. Damodaran, P.V.S. Namboodiripad and Dr K.M. Aboobeker. In 1968, left intellectuals from Kerala and other states had established the Indian School of Social Sciences (ISSS), which organized a seminar in Trivandrum on research in social sciences in 1969. I helped organize it by collecting donations as well as taking up other organizational responsibilities. In Bombay, I had helped the comrades in the Chembur branch of the CPI(M) to collect resources for running the Adarsha Vidyalaya. Regular and occasional collection of donations and contributions had been my expertise since long. The first time I went asking for donations was for performing the annual Saraswathi (Durga) Puja in my street. As mentioned, I was nicknamed ESP (Edavazhi Sanghom President). SSS (Saraswathi Sahaya Samgham) was the name we had given ourselves, a group boys my age. Of course, unlike the Vishwa

Hindu Parishad (VHP), the Rashtriya Swayamsevak Sangh (RSS) and the Bhartiya Janata Party's (BJP) Saraswathi, our Saraswathi was very harmless and who liked to play with children.

I remember two incidents at the Indian School Seminar. I was in the corporation hall, sufficiently early to receive guests. An old man, in a somewhat faded half shirt carrying an even more faded cloth bag, came in. He did not look like an intellectual. Presuming that he would clearly have no major role to play in the seminar, I guided him to one of the seats in the last row. Later, when some senior leaders came in, I saw them going up to him and talking to him very respectfully. After some time I came to know that he was Comrade P. Sundarayya, which made me feel very ashamed of my behaviour towards him. Later, I was entrusted with the job of presenting Professor V.Y. Kolhatkar's paper. He was the elder brother of the CPI(M) leader from Maharashtra, S.Y. Kolhatkar, who could not come to Trivandrum. After presenting his paper, I added my own statement, acknowledging it as mine.

I argued that there existed a fifth contradiction in the world besides the traditional four, that is, the contradiction within socialist countries, which was an antagonistic one. The USSR and China were on the brink of a war at that time. My argument was loosely that along with trade, there occurred a net outflow of surplus value from one country to another across a national boundary protected by an army on either side, and if continued for long, this would lead to antagonistic contradictions. Comrades from West Bengal accused me of not knowing anything about Marxism, which was true. I was only a party sympathizer at that time and was to study (and teach) Marxism only much later. Later, I had the opportunity to learn that Che Guevara had expressed very similar ideas in Algiers in

as early as 1964. I was only drawing some conclusions based on the USSR-China-Bulgaria relations.

In 1969, EMS' autobiography was published for the first time by Deshabhimani Book House. C.P. Narayanan, who had previous experience in printing and publication through the SILK, was given the responsibility of this task, and I was helping him. In 1970, at EMS's insistence, CP asked me if I would like to become a member of the party. To be admitted into the party was a great honour for me. I remembered Valentina Tereshkova, the first woman astronaut, who was offered a membership in the CPSU(B) while she was still in the space shuttle, and how she had felt extremely honoured. Even CP was only a sympathizer then and we joined the party together. A party group was formed which included, besides CP and I, Dr P.K.R. Warriar, Comrade M.S. Devadas, who had a sojourn with the CPI and was coming back to the CPI(M), Dr Jacob Eapen, and some others. By then, I was a regular activist of the ISSS, and we became the ISSS branch.

Indian School of Social Sciences

The ISSS had already become a noted institution. It had started publishing the journal *Social Scientist*, and V.S. Gaithonde used to be a regular contributor to it. On the advice of Jacob Eapen, Maharaja's College, Ernakulam invited Gaithonde to inaugurate the college union, who with his reckless drinking completely spoiled the function. It was decided to pack him off to Bombay. I was going to Bombay too and was asked to take care of him on the train and deliver him safely to his family who would be waiting for him at Dadar station. At Ernakulam junction, Thomas Isaac, who was the chairperson of the college union, delivered him into my hands. Isaac later went on to

become the finance minister of Kerala in the Left Democratic Front government. This was the first time I met him.

Thomas Isaac was only one of the many Students' Federation of India (SFI) leaders I met. I taught many of them Marxist philosophy, in a series of three camps—in Sasthamkotta, Neeleeswaram and Pattambi. After the camps were over, EMS told me that the people in Sasthamkotta could not follow my Valluvanadan Malayalam accent, and those in Neeleeswaram could only follow it a bit, though of course it was well understood in Pattambi, which was the centre of Valluvanad. I didn't realize that I had a Valluvanadan accent and had no idea where it had come from because I had never lived in Valluvanad. Even more strangely, I had spent all my childhood in Thrissur, but did not have the characteristic Thrissur accent.

* * *

The Madurai Congress of the CPI(M) was held in 1972. Many of us who were government servants couldn't participate. We also had to use pseudonyms while being involved in any party-related matters. I used to write as K.P. Ramachandran. Later, many others, including C.P. Narayanan, used my pseudonym on occasion. Working in the ISSS brought me into close contact with most of the top leadership of the CPI(M) like B.T. Ranadive (BTR), Basavapunnaiha, Umanath, Ahalya Ranganaker, P.B. Ranganaker, S.Y. Kolhadkar, Biman Basu and others. I was also active in the foundation conference of the SFI, held in 1970 in Trivandrum. Shaji N. Karun and his sister Sheela, Krishna Warriar and his sister Anasu, and Mohan, the son of M.S. Devadas were all volunteers then. They form a well-knit family even now.

With time, I got more and more involved in the running of the ISSS. I even allowed the use of my house to set up the Social

Scientist Press. The party considered the ISSS to be a clubhouse of Marxist intellectuals that had little relevance to the working class struggle. And so, though it was set up with the blessings of the party, the party did not feel any responsibility towards the ISSS. This made things financially more and more difficult to manage. In the early eighties, the ISSS ceased to function, though it was never formally wound up.

The Jatha Bug

The ninth annual conference of the KSSP was to take place in Tiruvalla during the first week of January 1972. The *jatha* bug had already bitten us at Ernakulam, and so, I don't remember exactly how, it was decided that two *jathas* of scientists, one starting from Trivandrum and another from Calicut, would converge in Tiruvalla. Later, a third *jatha*, starting from Shoranur was also planned, thanks to the enthusiasm of O.M. Srikumar. The *jatha* was to start in the morning, moving in cars belonging to the members, halt on the way at predetermined locations, talk to the people and reach the centre of Tiruvalla by 5 p.m. in time for the public meeting. I was designated manager for the southern *jatha*, which was inaugurated by EMS at the STEPS Maidan, then a small vacant lot in front of the AG's Office, Trivandrum.

Scientific Technical and Educational Cooperative Publishing Society (STEPS) was set up by the activists of the KSSP to publish books regularly because the KSSP did not want to do commercial activities on its own. But the STEPS could not satisfy the requirements of the KSSP for various reasons, and ultimately, the KSSP had to enter the field of publication in 1976 with *Wealth of Kerala*.

Coming back to *jathas*, this was the first time that I was organizing one. Later, of course, I went on to organize many more and on a much grander scale like the first All-India Kala Jatha in 1985, BJVJ in 1987, Ernakulam-Bihar-Madhya Pradesh *jathas* in 1990, Bharat Gyan Vigyan Jatha (BGVJ) in 1990, Bharat Jan Gyan Vigyan Jatha (BJGVJ) in 1992, Samatha Jatha in 1993, Hamara Desh Jatha in 1994 and Peace Jatha in 2003.

For the *jatha* in 1972, I had, through letters and by phone, organized *jatha* reception points. The captain of the *jatha* was Dr K. Madhavankutty, the vice principal of Trivandrum Medical College, and the other members were Dr S. Vasudevan Unni, the principal of Engineering College; Dr A.G.G. Menon, professor of Extension Agricultural College; and R. Gopalakrishnan Nair. The reception at Attingal Junction was noteworthy. It was 12 o'clock and the *jatha* was already running two hours late, but there were around forty organizations that participated in the reception, including the communist parties and their trade unions. They even garlanded the *jatha* captain, though I don't know how he felt about it. Later he went on to contest assembly elections from Calicut as a candidate of the right wing BJP.

By the time we reached the Bishop Moore College reception point, it was so late that the students had gone away and the platform had been dismantled. Yet, we managed to reach Tiruvalla in time for the public meeting. The Shoranur team reached too, but the Calicut *jatha's* vehicle met with an accident at Edarikkode near Kottakal and could reach only late in the night. Luckily, nobody was seriously injured. The council meeting of the KSSP was held at Mar Thoma College the next day. In that meeting, I was entrusted with the responsibility of secretaryship, Dr Madhavankutty became the president, M.N. Subrahmanian, who had already joined the SILK,

became the joint secretary, and Dr K.K. Rahulan, who became a member of the KSSP later, was made the vice president.

Translation camps, teaching demonstrations, seminars and many other programmes were organized along with the SILK. If I remember correctly, it was in the beginning of 1972 that I met C.G. Santhakumar. He became a regular visitor at my home in Thrissur towards the end of the fifties. My younger brother was one year senior to him in school, while my cousin who was living at our home was his classmate. I had already left for Bombay by then and never met him in those days. CG raised the slogan of 'into the schools'. He was a born science teacher and literally took *Sastrakeralam* and *Eureka* into the schools. The dictum 'science is doing' was, at that time, becoming popular. He initiated school science clubs in a number of schools in Thrissur district. Later, the Science Club Movement became a major activity of the KSSP.

Towards the end of the year, we started thinking about the KSSP's tenth annual conference. One day, in October, P. Govinda Pillai and I were sitting and chatting with PTB at his home in Trivandrum. We were discussing how we did the first *jatha* in Ernakulam in 1970 and then three *jathas* converging at Tiruvalla in 1972, and were wondering what to do that year. I had only just completed an all-Kerala tour conducting a series of dialectical materialism classes, with Dr Mathew Kurien and Comrade K.R.S Nair teaching other subjects. I had been using science—concepts of matter, space and time as well as origin of the universe and life—as the base and not class struggle.

An idea flashed into my mind and I suggested that we could organize a 1,000 statewide classes on three topics: development of the universe, development of humans and development of science. PTB jumped at the idea and agreed to coordinate the entire programme. It was decided that the lecture notes would be published as a special issue of *Sastrakeralam*.

PG (P. Govinda Pillai) wrote the ones on development of science, while I wrote the ones on development of the universe and development of humans. During the Science Week from 1st to 7th January 1973, more than 1,000 classes were taken by activists and sympathizers of the KSSP. Several new persons were also attracted to them. This series of classes later played a major role in developing the worldview of the KSSP members as well as activists of several PSM organizations that were born much later. Today, that set of classes is known as 'Nature, Science and Society'. These classes had a philosophical thread running through them. This is what they said:

1. There is nothing 'outside' the universe.
2. The universe has no beginning and no end. It is constantly changing.
3. Non-material things like love, fear and hatred have a material basis.
4. Motion or change is the mode of existence of the universe.
5. In the universe, everything is related to everything else.
6. Various life forms that exist today are the products of very long-term evolutionary changes.
7. In the early days, science was life itself.
8. Elementary principles of generalization and abstractization are ingrained into our languages.

In 1976, during the Emergency, the KSSP organized thousands of classes on nature, science and society in one month. Since most political activities were banned, many political activists found in this activity an outlet for their aspirations and energy. And so, instead of the expected 3,000 classes, nearly 12,000 were conducted, which were mostly on society.

The tenth annual conference of the KSSP was held in January 1973 in Calicut, and it was a grand affair. Professor V.K. Damodaran was the general convenor. The souvenir book published as part of the conference was a stocktaking and action-provoking document. At that conference, the constitution of the KSSP was amended. The Representative General Council of 300 elected members over and above ex-officio members was adopted in that general council. Two important decisions taken in that conference were: (i) The KSSP would strengthen its activities in universities and in scientific research and development institutions; and (ii) It would put more stress on science education.

I was to go back to Bombay at the end of my deputation period and so R. Gopalakrishnan Nair was elected as the new secretary. Mr K.R. Rajan was one of the vice presidents. Both of them were private secretaries to Agriculture Minister M.N. Govindan Nair, and during the valedictory address, he proudly proclaimed: 'I have given both of my private secretaries to the Parishad.'

A funny thing happened a few days later. The Hindu fundamentalist weekly *Kesari*, an organ of the RSS congratulated the Parishad in showing wisdom by not taking any Muslims into the executive committee. We realized, to our horror, that this was true and there were no Muslims in the committee. But it never occurred to us then, or even now, that in the KSSP committees, one should seek a balance of caste and religion. However, at that time, as a retort to *Kesari*, we inducted M.M. Bava into the committee.

Though we did a sort of stocktaking through the souvenir book, it was not self-critical enough. Further, there wasn't much of a discussion on our decade-long experience in the general council. We were by then publishing three journals, *Sastragathi*, *Sastrakeralam* and *Eureka*; we had begun organizing

science clubs in schools; we had been conducting bridge or tester summer courses for students who had appeared for the SSLC examination; we had established a publication concern in the STEPS; we had organized science *jathas*; and we were conducting 1,000 classes per week. Still, there was a growing feeling that all this was not enough. The introspection on our decade-long experience took place only a few months later with PTB, VKD (V.K. Damodaran) and me.

Back to the Barc

I returned to Bombay in March 1973 to re-join the BARC. By that time I had already taken the decision to leave the BARC and go full-time in the CPI(M) to energize its publication wing. However, I had to hand over the research and development work I had been doing in the BARC to others. Not only that, I was asked to be the general convenor of the fourth conference planned by the ISSS in Bombay in December 1974. That was quite a taxing job and I remember how tired I was by the time the conference was over. But it was a rewarding one. EMS, Ashok Mitra and many other leaders stayed with us in the UDCT (University Department of Chemical Technology) hostel.

In 1973, the SSP(M) Bombay was still alive, and that's when I met Dr K.M. Narayana Menon. He had had a chequered career. He hailed from an ancient Nair family near Ponnani, studied only till intermediate and, as many young people his age at the time, went to Bombay in search of a job. He joined the Indian Railways as ministerial staff and soon became a militant trade union leader. He too was dismissed from service along with his counterparts who participated in the general strike. Then he decided to continue his studies. He did his BA and MA and went on to obtain a PhD in linguistics. When I met him, he had just returned from postdoctoral work in the US and was working on a project at the TIFR, Bombay. He became quite active in the SSP(M) Bombay, where his

area of interest was linguistics and speech science. He was also an ardent Marxist. By 1974, his term with the TIFR got over and he moved to Delhi with the hope of getting a position in the National Council of Educational Research and Training (NCERT). He later became my long-term colleague in the ISSS and the BGVS.

In October 1973, I went back to Kerala for a month. One morning, I had a very long discussion with PTB. Perhaps VKD was there too. Many of us had been introspecting for a long time about the KSSP. We felt that the organization had achieved nothing spectacular in the past ten years. We felt that we were unduly infatuated with words, both the written and the spoken, as vehicles of science and knowledge. We wondered whether science lives and grows in laboratories and books or in factories and fields. Both PTB and I were students of Marxism, so it was natural for us to converge on the understanding that the bulk of science and technology lives at the interface between humans and nature in economic production activities. Science is as much on our fingertips as it is in our brains. If we were to ever succeed in taking the increasingly expanding body of science and technology to the people, we had to do it not through books, but through association with production. Most of the real production was taking place in the villages, agriculture, animal husbandry, cottage and traditional industries (*real* production takes place in the primary and secondary sectors and not in the tertiary sector). So the KSSP had to go to villages.

Though most of the activists of the KSSP had rural roots, they lived in towns and urban centres and seldom interacted with peasants or artisans. Some of us perhaps knew botany, even agricultural science, but not farming. We knew very little about the pond ecosystem, weaving or coir industry, metal industry or handicrafts. We had thought very little about science in

those daily livelihood occupations. So, we converged on the idea that during every summer vacation each of us would go and live in our ancestral village, or any other village, study from and share with farmers and artisans and organize expertise, formal or otherwise, available in the locality into some form of a science and technology group that could consciously help productive activities. This was the seed of an idea that led to the formation of the the Rural Science Forum (RSF).

PTB, VKD and I together prepared a two-page document, the actual drafting of which was done by me, on the RSF to be presented in the Northern Regional Workers Camp towards the end of October. I had to return to Bombay and could not participate in the camp. The concept of the RSF was accepted in the camp and became a formal activity of the KSSP a few months later. The idea spread and Madhavan Master organized the first Rural Science Forum in Kooveri in Kannur district in 1974. It took another couple of years for the RSF to take a final form. The handbook for the RSF was quite revolutionary. One can see in it the seeds of what became the PPC (People's Plan Campaign) two decades later.

In 1972, two new activities were initiated by the KSSP, the Sastrakeralam Quiz in Trivandrum and the Eureka Talent Test in Thrissur, which became highly popular in the years to come. The Sastragathi Talent Test was conceived in 1975.

The eleventh annual conference of the KSSP was held in January 1974 in Trivandrum. A seminar on the industrialization of Kerala was part of it. There was participation from other states too. One important participant was Dr K.R. Bhattacharya of the Central Food Technology Research Institute (CFTRI), Mysore, who was the president of the Council of Scientific and Industrial Research Scientific Workers' Association of India. The slogan 'science for social revolution' was coined during this conference. However, at that time there was no attempt

to define revolution or elaborate on how exactly science could contribute to it, except that it was an attempt towards creating a better society and science could contribute to it.

For the past five decades, the KSSP has been trying to define, redefine, focus and refocus the content of social revolution. In the seventies, there was an implicit understanding that it would be some form of a socialist revolution. But the collapse of the USSR and East European socialist states dealt a terrible blow to this hope. Since then, we have been less and less confident about the nature, and hence also the possibility, of a social revolution. However, in the seventies and eighties, 'science for social revolution' enthused and excited a large number of activists. Coupled with the new understanding that science lives at the fingertips of the peasants and artisans, this acted as a tremendous motivating force. From the very beginning, the KSSP had been using the word *science* in a broad sense including both *science* and *technology*.

Some time during the second half of 1974, I organized a blood donation camp at Anusakthi Nagar, Bombay. I had been regularly donating blood three or four times a year since 1957. Even when I was in Moscow, I had continued this practice. Human body is an efficient machine. It can replenish 80 to 90 per cent of the blood lost within twenty-four hours with only a small portion of the food it consumes. It is absurd that many patients die because of a short supply of blood. Each human body produces enough blood to be able to donate at least 1 litre per year. Every blood bank can be easily full. That is why I persuaded KEM Hospital and the local residents' association to initiate a regular blood donation and collection programme. The programme was a success as more than a hundred people donated blood that day.

Next day, I got a phone call from Dr Sumathi Nair who was in charge of the blood bank. She asked me to come for

a recheck because the blood I had donated had gone turbid overnight, indicating an excess of lipids, that is, cholesterol and triglycerides. The next day I went there and they confirmed this. My cholesterol level was about 380, which was far in excess of the maximum permissible level of 200–250. Dr Nair was at that time studying hyperlipidaemia in sedentary office workers. She requested my eight cousins, who were born to three brothers and were living in Bombay at that time, to come to her for a detailed check up. After all the check ups, she found that all of us had very high levels of lipids and hyperlipidaemia was a genetic condition with us. Which meant that all of us were prone to developing heart ailments. I can now see that it is true. Three of my cousins, three uncles and my brother have all died due to heart attacks. I started taking medicines and have been continuing with them for the past forty years. I too suffered from a mild attack in 1997, but it was not too serious. I also had an angioplasty and stenting in 2002 and a bypass surgery in 2005.

Good Bye, Bombay

Chintha Publishers

The fourth conference of the ISSS was over. All accounts settled, I was finally free to leave Bombay. I had already given notice to my superior. Many friends were unhappy and advised me not to resign. Even my party comrades in Bombay told me to keep my job and continue to help the party as much as possible like they had all been doing. ‘You don’t know the party. One day, they might just throw you out like curry leaves,’ they warned me. I replied, ‘I know that this can happen. I know what happened in the Soviet Party. Many insiders have shared their experiences with me. I will never become a financial burden on my party.’ At that time, I never imagined that I could become an ideological burden!

The party in Mumbai was not in an enviable situation. Party work had degenerated into a Sunday pastime, and later, into a faction fight. I knew perfectly well how much I needed to survive and was confident that I could make that through writing and other sundry jobs. I knew that revolution and security could not go together, and so, I opted for revolution.

This was not a democratic decision. I didn’t consult my wife or any other relatives before deciding to do this. The children were too young—Arun was ten and Vipin was seven—but I did not think of their future. In those days, education was not yet a commercial enterprise. And so, school education

was free and college education was not very costly, even for studying engineering. There were no self-financing colleges. Both my children got admission on merit to my alma mater, the College of Engineering, Trivandrum. Both of them also opted for electrical engineering, my old department. But in 1973, when I chose revolution and not job security, I did not think of these things. All I wanted was to see Indian children as happy and well looked after as Soviet children. I was not particularly worried about *my* children or *my* family. My wife was too dazed to argue with me, but she never forgave me for it. My party wages and the occasional income from writing were just enough to keep us from going hungry or being too deprived. We lived a lower middle class life then, and even now.

Meanwhile, steps were being taken for my final transformation from a nuclear engineer to a political activist-writer-publisher. The nucleus of Chintha Publishers had been formed. C.P. Narayanan left the Language Institute to become a full-timer at the CPI(M) looking after *Chintha Weekly*, the theoretical organ of the CPI(M) Kerala Committee. Comrade E.M. Sreedharan, the eldest son of EMS, left the chartered accountancy firm he was partnering with two other friends to carry out the preliminary work for launching the publishing house. Chintha Publishers was launched with the publication of a book called *Marxism: A Textbook*. It was a collection of essays, which consisted of essays by Marx, Lenin, Stalin and EMS. I had the honour of being placed in the company of these giants, as my small booklet on dialectical materialism, written in 1972 for the SFI classes, was included in it too. It was an exhilarating feeling, which only came to me again when EMS, in a note inside one of his books, addressed me as MP. Otherwise, he always called me Parameswaran. It was K.K. Krishnakumar or KK who started calling me MP. He said, 'Dr Parameswaran sounds too formal, just Parameswaran sounds too disrespectful.

Why not MP? Just like EMS, AKG (A.K. Gopalan) and PS (P. Sundarayya).’ The name stuck and I became a permanent MP without having contested any election! My friends from other countries like the US, Africa, China, Philippines and Thailand also call me MP.

I must have met KK for the first time in 1970–71 when he was still a student in the Engineering College. He came with his friend Vijayakrishnan, a chemical engineering student who volunteered to help with the publication of the newly founded children’s science magazine, *Eureka*. In 1972, he graduated and came to Trivandrum with his friends, Babu Bharadwaj and another Krishnakumar, a chemical engineer. All three of them were jobless. I was then assistant director (technical) in the SILK. To help them earn a living, I gave them books to be translated into Malayalam. Later KK joined the SILK as an employee and never pursued a career in engineering thereafter. His first serious engagement with the KSSP was in the science week campaign of 1st to 7th January 1973, on ‘Nature, Science and Society’. The dialogues with villagers on astronomy and their curiosity to know more thrilled him and turned him into a full time people’s science activist. I was one of his confidants during his love affair with Eliamma, whom he later married with the full concurrence of his parents. He was accepted as a member of my family, which gave my wife the freedom to chide him. He was very fond of *pappad* and whenever he would come to our home he would go straight into the kitchen to look for the tin containing fried *pappad*. My children, whenever they would see him coming, would rush into the kitchen and tell their mother, ‘Amma, Krishnakumar uncle is coming. Please hide the *pappad*’.

Thomas Isaac is another person who has been a colleague and a family friend for several years. During his student days, and later too, he was a frequent visitor. We still reminisce about

how he bought a kilogramme of fish once and cooked it in our kitchen, with my younger son as his assistant. My wife, who was a strict vegetarian, had left the kitchen to them after finishing her work. For a long time, Isaac was a member of the KSSP's executive committee. He opted out of it when he became a state committee member of the CPI(M). We had authored a few books together in Malayalam, had dreamt together and worked together in Resource Mapping and People's Plan Campaigns. After he became the finance minister of Kerala, we had lesser opportunities to work together.

My association with KK was longer and deeper. He spent more than ten years as a full timer (on deputation) on literacy—first on literacy in Ernakulam, then on literacy in Kerala and then with the BGVS-National Literacy Campaign. He ran the BGVS organization for nearly ten years after I went back to Kerala. He was its treasurer secretary and later president and is the most well-known literacy activist in north India. My own experience of each day being better than the previous one was more than due to friends like him, Vinod Raina, Asha Mishra and many others.

The book, *Marxism: A Textbook* was published on 23rd September 1973, the martyrdom day of Azhikodan Raghavan. In three months, 5,000 copies were sold. The political activists of Kerala were unbelievably thirsty for knowledge and for books on Marxism. For roughly one and half years, no new books were published.

I joined Chintha Publishers in February 1975 and took full charge of the publication. From then onwards till 1987, I worked as a full-timer of the party, looking after Chintha Publishers together with C.P. Narayanan and E.M. Sreedharan.

A new party branch was formed directly under the state committee for comrades working in Chintha Publishers. I was its secretary. In the branch there were two illustrious persons,

Cherukad, the activist-writer, and Kochaniya Pisharody, a direct recruit of Comrade P. Krishna Pillai, who were much senior to me in age and in the party.

Why I Became a Communist

Often I have been asked why I left such an exciting and prosperous job in the BARC, why I sacrificed my future and why I became a communist? Obviously, it wasn't the economic or class circumstances of my life that turned me into a communist. I was reasonably well off, and even though we were part of the lower middle class, my father belonged to an orthodox feudal Namboodiri family. I had gone through most of the rituals that Namboodiri boys were supposed to in those days, but I could always feel an air of sympathy towards the communist party around me.

To the best of my knowledge, my father had always voted for the communist party. I remember seeing a lot of party publications at home. However, a more vivid memory is of carrying them all to bury in a pit, at my father's instance, when the party was banned in 1948. EMS and my father's younger brother were friends, and I had seen him when he lived underground. C. Achutha Menon lived at a shouting distance from my home, though I don't remember seeing him in those days as he too went underground. Election to the newly formed Travancore-Cochin state assembly took place when I was in my teens, studying in the tenth class. C. Achutha Menon contested and won the election. In those days, I never felt I was political. It was something that didn't exist for me.

My mother was a liberated woman. She was also patient, tolerant and broad-minded. I still vividly remember one incident concerning a Namboodiri from the Kariyannoor

family, who was a good friend of my father and a colleague in Vedic recitals, and used to visit us regularly at home. He fell in love with a Muslim girl and converted to Islam to marry her. This was in the early forties. He assumed a new name, Kariyan Abdullah. He continued to visit us, but he was no longer allowed into our dining room. He used to eat in the veranda from a plantain leaf, which he had to pick up and throw into the pit on his own because our maid wouldn't touch anything touched by a Muslim. As years went by, I realized that he was no longer fed in the veranda, but in our dining room. Our maid still refused to clear the place where a Muslim had eaten, but my mother would do it, which was quite unacceptable for a high-caste Namboodiri woman to do.

My mother was not only broad-minded and tolerant, but also hardworking. Of course, it was partly because of necessity. My father's income was less than 100 rupees a month. The paddy we got as rent from our tenants wasn't enough for more than three or four months. So, for the rest of the time, we had to depend on the rations shop for provisions like rice, wheat, sugar, jaggery and kerosene. The family was also growing and by the late forties, we were already seven of us, and two more siblings arrived within four and five years. So my mother had to be efficient and hardworking. My wife says that I have imbibed many of my mother's characteristics. I am only glad.

In those days I was busy with play and studies and never gave any thought to politics. Saraswathi Puja used to be one of our favourite festivals, not only because one was not supposed to read, but also because one got to make and decorate an improvised temple of books. Decorating the improvised temple and getting the oil lamps to burn in front of it required money. In order to save money for this a few boys from the neighbourhood and I became members of a weekly *chitti*, a savings group, by contributing one-fourth of an anna a week.

That was, perhaps, my first organizational experience. My involvement in Saraswathi Puja was not because I felt any divine presence there. It was all a game for me. Neither then nor later did I ever feel any need for the ‘god hypothesis’, as Laplace put it to Napoleon 200 years ago. I was a natural materialist despite my childhood social environment. I still didn’t have anything to do with politics or communism then.

In 1952, during my interview for admission into the Engineering College, the chairperson, Professor Rajaraman asked me in a rather flippant manner, ‘Why are all Namboodiris communists?’ I replied in a similar tone: ‘All of us are not communists, but many of us are, not in the political sense, but in the “*kammi-oonists*” sense (that is, people with food deficit; *kammi* means deficit and *oonu* means food in Malayalam).’ The Namboodiris were, by and large, middle class or poor, but not abjectly poor. They were not vulgarly rich either, like the landlords in the north.

In Trivandrum I became acquainted with a person who was running a bookstall called MSCO, where I bought a fat volume of *Das Kapital* for one rupee. I thought it was a cheap buy! I still have it with me. When I tried to read it, I couldn’t make head or tail of it. I was also too focussed on my studies because I knew perfectly well the risk taken by my father to send me to college. He had mortgaged our only asset, our house, to raise money and there were four more brothers and two sisters to educate. He was depending on me. I had to finish my education, get a job, redeem the mortgage on the house, and educate my siblings. In the diary that I used to make notes occasionally, I once wrote: ‘Politics is the science of scarcity. I don’t want to have anything to do with it.’ At that time I didn’t and couldn’t differentiate between politics and politicking. I was actually distancing myself from politicking and not politics. Now I know that nobody can be free from politics, that even

the so-called apolitical stance is the acceptance of the dominant political system.

My first serious introduction to politics came in the beginning of 1962. It was through Marxist philosophy, dialectical and historical materialism and theory of knowledge. I happened to come across a textbook, *Fundamentals of Marxism–Leninism*, published by the official Institute of Marxism–Leninism in Moscow. What struck me in the book was its introduction of dialectical materialism through physical sciences, that is, matter, space and time. The materialist framework developed in it, relating space and time to matter and its motion was really exciting, something that I had never thought of before, but so obvious when one thought about it. Marxism suddenly became for me not only a philosophy of politics but also a philosophy of science. That understanding is as deep today as it was then in 1962. It never occurred to me that ten years later I would be teaching Marxist philosophy to the activists of the CPI(M) and that I would be writing a textbook on dialectical materialism that would be widely used by the party for more than three decades. In October 1962, when I went to Moscow as a PhD scholar, I had not even dreamt of a political career. My only ambition was to improve my scientific career and to help my father in educating my siblings.

Unlike many other friends, I went to the USSR with a sympathetic attitude towards socialism and communism. What I saw there and learned from the Soviets strengthened this sympathy. Intellectually I was already a Marxist. There I became a Marxist emotionally, too. There are several reasons why this happened.

The overall security in life experienced by the Soviet citizen was one of them. They enjoyed employment, education, health care and rest as their right. The care and love with which society looked after the children, from providing crèches and

kindergartens to professional and university education, to the pioneers and the pioneer palaces, made indelible impressions in my mind. It is only natural for any human being to hope that the children in their village and country enjoy this kind of happiness too. This desire has kept me active till this moment.

Reading Leo Tolstoy, Dostoyevsky, Gorky and Pushkin gave me a humanistic orientation. But the post-revolutionary novels of Alexei Tolstoy, Nikolai Ostrovsky, Boris Polevoi, Daniel Granin and the autobiographical novel of Anton Semenovych Makarenko laid bare the cost at which socialism was achieved. The commitment these writers had shown to the socialist cause filled me with altruistic emotions.

The combination of intellect and emotion shaped a particular attitude in me to banish the word 'sacrifice' from my vocabulary and substitute it with 'exchange', which meant leaving something which gave less happiness in favour of something which gave more happiness.

But, as mentioned earlier, I observed certain disconcerting features in the Soviet Union too. The leaders wanted to catch up with and overtake the US, not in humanism or quality of life, but in military strength and production of consumer goods. Their ideals were not set within the framework of socialism and communism, but of capitalism. Later on, I learned that the CPSU(B) and most of the other parties had made compromises with several basic tenets of Marxism. But when I was there, I observed that the bureaucracy was sluggish and unfriendly to the people.

The members of the Communist Party in Soviet Union, especially the leadership, enjoyed special benefits. Many of them had lost or never had communist ethics or morality or even proper knowledge of Marxism. The people at large lost respect of the Party members and they distanced themselves from the Party. The youth for whom Marxism-Leninism

was a compulsory subject for higher education seldom took it seriously and considered it only as a hurdle to be crossed over. People began to crave quality consumer goods from abroad, which showed the developing of a vulgar consumerism among them. Illegal foreign exchange transactions were on the increase. National, and even regional, politics was degenerating into caucus groups and undercutting each other. People were feeling helpless against the state, which was becoming more and more repressive. And since there was no corrective machinery, no democracy, corruption became pervasive.

Though I saw Moscow of those days as a paradise on Earth, I was also witnessing its degeneration into hell. All these led to the development of a comprehensive worldview, consisting of philosophy, economics, politics and culture. The proto-worldview developed in a hazy, amorphous form during those years became sharper and clear as crystal many years later in the form of the Fourth World concept. What Marx termed the 'network of associated producers' is a society where production is basically for consumption and not profit. It is conceptually very similar to Gandhiji's self-reliant and self-sufficient village republics. The Indian left movements of the twentieth century rejected both Gandhi and Marx. My own interest and initiative in science popularization and mass literacy stemmed from the understanding that the only possible remedy is participatory democracy, which can only be achieved in a scientifically educated society.

In the middle of 1972, in a conversation with me, EMS suggested I write a textbook on dialectical materialism, starting from science and the material world as I had internalized it. The party also asked me to teach dialectical materialism to the SFI cadre. This was my initiation as a teacher of Marxism. Initially, I didn't have enough to teach for more than thirty to forty minutes. As time went on, I had more and more to say.

I remember, in particular, a course for party members of the Electricity Workers' Association. It was a marathon session of about sixteen hours, consisting of dialectical materialism, historical materialism and theory of knowledge. I expanded the original booklet on dialectical materialism into a full-fledged textbook, which went through several editions and was used as the main textbook till I was expelled from the party in 2004.

I still don't understand why the party expelled me. To the best of my knowledge, I was made a scapegoat so that the two warring factions in the party could be brought together. If that had happened, I would have been glad to be expelled, not once but twice. But it didn't happen. The infighting got worse much to the detriment of the entire left movement.

The concept of the Fourth World was introduced in an academic paper presented at the Eighth All India Peoples Science Congress held at Nalanda to denote a group of countries where capitalism had been overthrown or weakened and they were on their way to socialism. This post-capitalist, pre-socialist period could last for quite a long time. How the economy and politics of these countries could be planned so that society would move forward towards socialism and not go back to capitalism—as it had happened in the USSR, Eastern Europe and China—was the content of the paper. The essential features of such an economy had been elaborated on by me in my article in *Chintha Weekly* in May 1974.

A year-long controversy raged in the media about the Fourth World. It was in fact not a controversy, but a vilification campaign. I did not take part in it. Finally, in January 2004, I was served with a show-cause notice by the party and barely given a week to respond to it. In fact, they had already taken the decision to officially expel me much earlier. The protocol of warning, censure and suspension was not followed. I was straightaway expelled. I did not appeal the expulsion with the

control commission because I had never wanted any party position or any personal benefit from the party. I knew that I didn't need any formal party membership to work for the exploited and impoverished majority. None of the senior leaders of the party considered me an enemy of the movement; they are still my comrades. But differences in understanding still remain about:

- Growth, development and progress
- Accelerated growth rate and inclusion/exclusion
- Dictatorship of the proletariat and proletarian democracy
- Urbanization and ruralization
- Environment for or against development
- Building socialism from top down or from bottom upwards

I continue to be a scientist and find nothing in Marxism that is against science. I find Marx's arguments perfectly scientific, though I cannot say the same about the praxis of Marxists. The Chinese Communist Party is busy building capitalism on the pretext that socialism requires an enormous economic base. What will follow is a full-fledged development of capitalism in India and China, in Asia and Africa. Resources will be exhausted, oceans and atmosphere will be totally polluted, weather systems will go completely haywire, and national, communitarian and other identity conflicts will reduce us to mere barbarians—that is if we are lucky. Else the species itself will become extinct.

I firmly believe that Islands of Socialistic Societies have to be built consciously within the womb of the capitalist system, both as centres of struggle and construction, and to show that there are limits to growth but not to development and progress; that democracy cannot be built through dictatorship; that

small has to become powerful to make socialism sustainable; that socialism has to be built from the bottom up; and that metropolitan cities are incompatible with socialism.

Emergency Is Declared

The year 1975 was an important one in free India's history, as Prime Minister Indira Gandhi declared a state of Emergency in the country. She found 'foreign threat' to India's democracy in the Total Revolution Movement of Jayaprakash Narayan. There was nothing more absurd than that. So, to save democracy she packed democracy off and put it under lock and key. What was stranger and very disconcerting was the support by the Soviet Union and the CPI to Gandhi's autocratic rule.

Emergency was declared on 24th June 1975 at midnight. The three-day state plenum of the CPI(M) was to begin the morning after the next in Calicut, where all the leaders had assembled. It was not clear whether the government, under C. Achuta Menon and K. Karunakaran, was going to arrest them and put them in jail. Anyway, the party decided to go ahead with the plenum, which was held at the Tagore Centenary Hall. AKG gave a spirited speech, which he concluded like this: 'We have to be thankful to Indira Gandhi. The communists have, since long, lost touch with how to function as illegal entities, working underground. Indira Gandhi has given us an opportunity. The opportunists will run away, but the communists have an opportunity to show their mettle.' The plenum was wound up before noon.

Next week, opposition leaders decided to break the law and lead a march to the secretariat. They knew that they would obviously be arrested and put in jail, and that they would be incarcerated for perhaps months or years. Jail life gives political

leaders time to reflect and to write, away from the daily grind of political activities. CP and Aniyar (Sreedharan) and I from Chintha gathered at EMS's house and planned, along with him, what books he would write when in jail and in which order. We came up with a list consisting of a dozen books and pamphlets. The next day, EMS, as one of the leaders of the march, was promptly arrested, but they released him the same evening in some faraway place. They did not put him in jail and our hopes of getting new books written by EMS were dashed.

The government, however, had a different attitude towards younger people. Years ago, in the early seventies it had set up a cell to deal with Naxalites under a notorious officer called Jairam Padikkal. A camp was set up on a hillock in a vast compound in Panikker's Lane of Trivandrum, which was a torture camp, and Padikkal was a confirmed sadist. Many either lost their lives or were incapacitated for life there. 'Invitation to Panikker's Lane' had become a very common expression in Malayalam.

One day, I too received an invitation to Panikker's Lane. I was participating in the History Congress at Calicut when I got a phone call from my cousin M.C. Vasudevan informing me that Padikkal's personnel were searching for me. He asked me to immediately return to Trivandrum and go to his place instead of my own house. I went underground in his house in Palkulangara. He had friends in the police department who made secret enquiries about the reason Padikkal's office was looking for me because there didn't seem to be any clear logic in putting me on their list. After two days, my cousin found out that it wasn't anything serious. The police weren't all that concerned about finding me and I could safely go home. So, on the third day of being underground, I went to the special cell office at Panikker's Lane, where I was greeted by a circle inspector who had a few questions to ask me. A union leader

of the Vikram Sarabhai Space Centre (VSSC) employees, who was also a member of the Congress party, had put in a complaint that a senior scientist from the BARC had settled in Trivandrum and was planning to blow up the entire VSSC with atom bombs. So, the inspector wanted to know if I had brought an atom bomb with me when I left the BARC. Even the police knew how silly that complaint was, but because it was referred by the Centre, they had to enquire into the matter and send in a report. The interview lasted only for a few minutes, and after I left Panikker's Lane, I was back at home and no longer underground.

During Emergency, some interesting events took place. Home Minister K. Karunakaran sent a circular, through Education Minister C.H. Muhammad Koya, warning against the 'intervention of the KSSP' in school science clubs. The education department would set up an official Science Club Association with someone called Kuttisankaran as president and all schools were to approach it for help and guidance for science club related activities. Some school authorities got nervous, but most schools continued their association with the KSSP. Karunakaran was unhappy, as he believed that the KSSP was an auxiliary organization of the CPI(M), which was very far from the truth. Dr K.K. Rahulan, a close friend of Karunakaran, who was not a communist by any means, was then the president of the KSSP. He met Karunakaran and persuaded him not to take any precipitous step. While this was going on, an interesting government file was being pushed from department to department in the education ministry with the comment that 'this department has no such programme'. The programme in question was on 'assistance to science popularization'. Dr P.K. Gopalakrishnan, the secretary of the planning board called me and told me about the programme,

which had a budget of Rs 2 lakhs. He said that no department was interested in it and the file was increasingly growing thicker with no positive outcome. He wanted to know if the KSSP would be interested in submitting a proposal for undertaking the programme.

After discussing with the others, I made a project proposal to provide 1,000 schools and RSF libraries with Rs 200 worth of science books each. That was some time in the middle of February 1978. The project was approved, but the KSSP did not have enough number of books whose value would add up to Rs 200. So the list was supplemented with books published by the SILK. In all, we collected 40,000 books.

It was one of the most hectic operations we had ever conducted. Exactly 1,000 gunnysack bundles had to be made, each containing books worth Rs 200, and time was running out. For each bundle, invoices and duplicate delivery notes had to be prepared. One bundle each had to be given to 600 RSFs and 400 schools, one in each panchayat. The education officer in each concerned district was to receive the books and issue receipts. A packing shed was built in Attingal Ramachandran's house, where packers were drawn from the SILK. Ramachandran, Kochu and I monitored the packing and counter-checked lists of books for each panchayat. It took nearly a week to prepare the bundles. All deliveries had to be made before 31st March, which was a holiday, but we managed to get the bundles ready only by 29th March. Special mini-lorries were hired to carry the books. Instructions were given to the district education officers, by the DPI, to be in office to check the bundles and issue receipts, irrespective of what time the lorries arrived. In the end, we managed to do it quite successfully. The KSSP got kudos from D.C. Kizhakkemuri, the doyen of the Kerala publication industry, not only for publishing the books, but also for efficiently distributing them.

Thus, on the one hand the state government was harassing the KSSP, and on the other its education department was giving the KSSP the first ever government grant. The Silent Valley polemics were just starting, which I will talk about in the next chapter. The relationship between the KSSP and the state government grew into one of mutual help and opposition. This situation continues even now.

Nature, Science and Society

The year 1975 was of changing gears for the KSSP. With Indira Gandhi's declaration of Emergency in June, left political activists realized that most of the activities they were involved in before had become impossible. They found that they had a lot of free time on their hands, which they decided to give to the KSSP. As mentioned earlier, the KSSP decided to repeat the 'Nature, Science and Society' lecture programme by organizing 3,000 classes during January 1976 leading up to its thirteenth annual conference. It was also suggested that those lectures be prepared at three levels—for children, for the general public, and for graduate and post-graduate students. A three-day training camp for teaching volunteers was held at Trivandrum, which was attended by around 400 people.

The university-level lectures were prepared by me and were published as a special issue of *Sasthragathi*. Lectures for schools and children were written by KK and were published as a special issue of *Eureka*. This book became extremely popular later when several of its editions were published in Malayalam and it was also translated into many Indian languages. The lectures for the general public were written by M. Stephen and were published as a special issue of *Sastrakeralam*. Instead of the planned 3,000 classes, nearly 12,000 classes were held in

one month, according to reports from the field. There was a sort of frenzy to organize as many classes or lectures as possible. It was interesting to note that most resource persons were eager to lecture on society rather than on nature or science.

There were very interesting and invigorating experiences during the lectures. KK still remembers the times he spent with the peasants, agricultural workers and children gathered in far-off villages, talking about the wonders of the universe—discussing the life of stars, studying how far they were, identifying some of them in the sky—and the earnestness and curiosity with which the villagers participated in the dialogue. In the villages, sessions started usually in the evening by seven after dinner and went up to nine or ten in the night, and were often held outdoors. There were occasions when some friends in their enthusiasm to uphold and promote a scientific temper chastised people holding superstitious beliefs. One of them reported an interesting experience when after a spirited lecture about superstition, one audience member stood up and asked if the lecturer could give them a checklist of superstitious beliefs explaining why they were superstitious, what harm they could do and why some other beliefs were not superstitious despite the fact that they were only beliefs. The lecturer was intelligent enough to know that in all honesty he could not answer the question and told the person so.

I too had an interesting experience in Quilandy in Malappuram district. The session was organized in the form of a parliament and the theme was nature and science. It was organized by the local unit of the KSSP and the Islamic Cultural Society. Dr Aboobecker, the district medical officer, was the president of both. One week prior to this ‘parliament session’, boxes were placed in schools, government offices and other locations where citizens could deposit their questions on

nature, life and science. If I remember correctly, we received around 200 questions. A majority of them dealt with the nature and origin of the universe and the origin of life on earth. On the appointed day, my friends took me to the ICS Hall, which was very narrow and very long. I was surprised to see that the front rows were occupied by Muslim mullahs dressed in white robes. After the usual welcome and introductory remarks, I was called upon to answer the questions. I stood up and began: 'Friends, we have received about 200 questions, a large number of which relate to the nature and origin of this universe, and also to the origin of life. I shall first deal with those relating to the universe....'

'Sir, a point of order', a mullah from the front row stood up and asked, 'Does the scientist know everything about the universe?'

'No, only a little,' I answered promptly.

'Then you don't have any right to speak about the universe. Sit down,' he proclaimed.

I realized then that the large contingent of mullahs was there not to learn but to disrupt the lecture. Luckily for me, Dr Aboobecker was presiding.

I said to the mullah, 'Sir, here is a doctor. When you are sick, you go to him. Am I right?'

'Yes, you are right,' he replied.

I then turned to the doctor and asked, 'Doctor, do you know about all the biochemical and chemo-electrical activities going on in this person's body? Do you know the varied reactions taking place in his brain, his liver, his kidney ...?'

'Oh no, no. In fact I, or any of us, know very little of what is happening inside his body,' Dr Aboobecker replied.

I again turned to the mullah and said, 'This doctor says that he knows very little of what is happening inside your body.'

Yet, you go to him and allow him to treat you. Similarly, don't I have the right to share with the people whatever little we scientists know about the universe?'

From the back rows some people shouted, 'Yes, you have the right. Go on.'

The mullah sat down, and the session went on for more than two hours after that. At the end of the session, some of the mullahs approached me and asked me if science provided total knowledge. When I replied in the negative, they said that religion does and that they would conduct a parliament on religion. They wanted to know if I would attend it and I agreed. I don't know if they ever held that parliament. All I know is that if they did, they did not inform me about it.

Peechi Camp

The KSSP had accepted 'science for social revolution' as its perspective slogan and had conceived the RSF as an important tool for this. All of us felt that it was now time to get together informally and do some collective introspection and dreaming. A group of about eighty senior activists of the KSSP gathered in Peechi, a dam site resort near Trichur town from 9th to 11th May 1975, and was later remembered as the Peechi Camp by all of us. This camp became a regular feature of the KSSP as the annual workers camp. The second camp was held at Vazhathope in Idukki district and the third at Kaladi. There were long sessions to discuss what the KSSP had done during the past decade, what social revolution meant, what was science, what was the meaning of development, whose was it, and so on.

The KSSP had already become involved in one of the consequences of development, that is, pollution. The residents

near Madurai Coates (now Vaigai Threads), a well-known industrial unit in Koratti, had been complaining about the colour of the water in their wells, its bad taste and various diseases. A KSSP team, under the leadership of Dr C.T. Samuel from the environment science department of Cochin University, visited the place and traced the pollution to the effluents from Madurai Coates. However, their efforts to persuade the management to take ameliorative measures failed. A group consisting of scientists concerned with the environment was being formed in Kochi, which included Professor M.K. Prasad, Dr U.K. Gopalan, Dr Quazim, K.K.P. Menon, Professor C.T. Samuel, Dr P.V.S. Namboodiripad, and others. The group was called Cochin Science Society. After the Stockholm conference in 1972, this group organized a seminar in 1973 and adopted a resolution that the state should enact an environmental protection law. In 1974, the Central Water Pollution Control Law was enacted. The KSSP responded with the formation of a Health and Environment Brigade, which was one of the earliest subcommittees of the KSSP. All these issues were in the background of our discussion at the Peechi Camp.

At the camp, there was general agreement that the RSFs could play a very important role in advancing the cause of social revolution. There was a lone voice of dissent, which belonged to Dr K.G. Adiyodi, the founder secretary of the KSSP. He argued that the science–society interface was fraught with danger and would force the KSSP to take political positions. He was firm that the KSSP should not be political, though others did not share his views. They felt that Dr Adiyodi's stand too was political as a partisan of the ruling classes and that the KSSP should be a partisan of the have-nots. In that meeting, Dr Adiyodi said goodbye to the KSSP.

The camp was a rejuvenating event for all the activists. The decision to start a new periodical, the *Grama Sastram*, initially

called *Gramasastra Samithi Bulletin*, was taken at the camp, whose first issue was published in January 1977. It was in this camp that the KSSP decided to enter the field of publication directly instead of relying on the STEPS alone. It was also decided to celebrate the month of January 1976 as science month and to organize 3,000 classes on 'Nature, Science and Society'. The activists also resolved that within a year, at least 300 RSFs would be set up.

The Peechi Camp was by all means a landmark in the history of the KSSP, and an act of changing gears. The KSSP committed itself, irrevocably, to the cause of the downtrodden and reaffirmed its partisanship in favour of the have-nots. The decision to enter the field of publishing later helped turn the KSSP into a unique organization that was totally self-sustaining. Instead of growing into what is generally understood as the NGO (non-governmental organization) culture, the KSSP blossomed into a People's Science Movement (PSM). This term was coined three years later, in 1978, at a national workshop of similar organizations and movements. An attempt to define this similarity led to the coinage of this term. Till then, the KSSP had depended on personal contributions from members and event-related donations from the public to carry out its activities. The success of its first major publishing venture—a gift of eleven books at a pre-publication price of Rs 22—opened up a new avenue for the KSSP to be self-reliant and expand its activities. Around 8,000 copies of the first set of books were sold in advance of being published.

The idea to form factory science forums, similar to the concept of RSFs, also came up, but it couldn't develop further due to the lack of clarity. Safety practices and occupational diseases were some of the areas to be covered by the factory science forums. Out of these discussions arose the concept of

the START (School for Technicians and Artisans) to provide artisans and technicians the scientific knowledge behind some of their excellent practices, in short, to strengthen the *hand* with the *head*. The first school that was organized for electrical wiremen became roaringly popular. We had to discontinue it after some time because it started being misused to give worthless certificates to Gulf aspirants. The attempt to provide training to concrete workers, press workers and motor mechanics did not succeed because of the lack of a competent faculty within the KSSP. The concept of continuing education to interested citizens through distance learning was an offshoot of the START. Professor P.K. Ravindran was in charge of it. For this, under T.K. Kochunarayanan's leadership, a source book titled *Nature, Life and Society* was published. However, there were not many takers for this programme, as the KSSP could not set apart sufficient faculty support.

The second activists' camp held at Vazhathope from 21st to 22nd May 1976 was noteworthy for two major decisions: (i) The KSSP would study the resources of Kerala and get involved in the development planning of the state; and (ii) The KSSP would give shape to an education policy for Kerala. As a step towards the first decision, the book *Wealth of Kerala* was prepared and published. Dr T. Gopalakrishnan, Dr K.N. Shyamsundaran Nair and Thankappan Achari from the Kerala State Planning Board, K.P. Kannan, Dr Narayanan Nair from the Centre for Development Studies and Dr C.T.S. Nair from Kerala Forest Research Institute (KFRI) contributed to it. Kannan was the only one who wrote his chapter straight in Malayalam. The other articles were written by me in consultation with the experts. I think I spent a total of about 300 hours in discussion with each of them and then wrote each of the discussions down on the same day. It was an exciting

job and a learning experience. The book was well received by academics, the officialdom and the public of Kerala. It ran into several editions and led to a number of sequels like *Agriculture in Kerala*, *Cashew Cultivation*. It also inspired three souvenirs dealing with the primary sector, modern industries and traditional industries, and the monograph titled 'An Introduction to Discussions on the Eighth Five-year Plan'. That was in 1988.

Then came Panchayat Resource Mapping (PRM), an idea derived from the participatory mapping of the Vazhayoor panchayat, led by A.P. Chandran and the *Resource Atlas of Kerala* published by the Centre for Earth Science Studies (CESS). From there to the Kalliassery experiment and then to the People's Plan Campaign (PPC) appeared to be a natural course to follow. Dr Thomas Isaac had been involved in this since the early eighties. When he became a member of the Kerala State Planning Board, he carried along with him the idea of local-level planning, which later helped him in the conceptualization of the PPC.

The thirteenth annual conference of the KSSP was held at Kannur in 1976. The souvenir book published on that occasion had a substantial section on education. It was perhaps the first time that the KSSP began to develop a comprehensive view on education. As early as 1972–73, the KSSP became involved in the field of formal education by setting up science clubs in high schools and science corners in primary school. But it was in this souvenir book that the KSSP expressed a comprehensive approach to education. Six years later, on the occasion of its nineteenth annual conference, the KSSP brought out its major document on education, *Vidyabhyasa Rekha*.

MNS vociferously argued for a KSSP policy on education. The trajectory of the KSSP's contribution to education started

with enrichment classes, *Vijnanostavs*, 'living with science' camps, integrated science teaching experiments, eradication of illiteracy from classrooms, Education Enquiry Commission, Education Commission, Operation Classroom projects, curriculum research, Educational Resource Unit (ERU), and changes in mainstream curriculum, eventually leading to the development of a fairly competent resource group in education.



Baiju Parseed (left), Vinod Raina (centre) and MP (right), 2001



MP (left) and Jiang Zidan, Chinese writer (right), 2001



MP talking to a delegation from China, 2001



*MP with a delegation of university professors from China:
Huang Ping (back row, right 2), Wen Tiejun (back row,
right 4), MP (back row, right 6), Dai Jinhua (front row,
right 1), Lau Kin Chi (front row, left 2)*



MP attending a seminar at CDS , Trivandrum



*Vinod Raina (left 1), MP (left 2), Huang Ping (right 2)
visiting Dr. K. N. Raj and Dr. K. P. Kannan at Centre for
Development Studies, Trivandrum.*



*MP (centre), and Lau Kin Chi (right) and
V. G. Gopinathan 2001*



*MP's wife Bhavani (left), MP (centre), and Lau Kin Chi (right),
outside MP's home at Trissur*



MP (left) and KK Krishna Kumar (right)



MP with a delegation of writers and editors from China



MP with his forever optimism



*MP's wife (front left), MP (front right),
Chen Xin (back left), Luo Hongguang (back right)*



From left to right: Siu Wing Yip, MP, Amy Yeung, KK Krishna Kumar, Harsh Sethi, Chen Xin



ARENA-CASS Workshop on Rural Transitions: Coping with Globalization held in Beijing, August 2001. From left to right: Harsh Sethi, Huang Ping, MP.



MP (right) talking to Wen Tiejun (left), Chief Editor of China Reform in 2001.



MP talking to a delegation from ARENA.



MP talking to a delegation from ARENA



MP with a delegation of university professors from China, 2001.



MP giving a talk to students from Hong Kong on a summer exchange programme



Sit Tsui (left), MP (centre), Amy Yeung (right)

The KSSP Panorama

Engagement with Education

Looking back, I realize that it was with education that I had the longest period of engagement. It's possible that the early activities of organizing Saraswathi Puja had some influence on me. I have written more on education than on any other subject. Writing the paper 'Why Formal Education?' for the souvenir book of the thirteenth KSSP annual conference in 1976 was my first serious attempt. Since then I became involved in almost all education-related activities of the KSSP. I was deeply involved in the preparation of the Document on Education 1982, the integrated science teaching experiment in Vellanad, *Sastra Sahawas* (living with science) camps, *Balotsavs* (children's festivals), *Sargotsavs* (creativity festivals), *Sneha Sahawas* (living with love), curriculum discussions, teacher trainings, and so on. I believe that teachers, as mentors of the future generations, have a supreme role to play in the realization of 'science for social revolution'. Education has three basic functions: (i) to help maintain and advance 'business as usual', that is, a status quoist role; (ii) to initiate a 'change in business', that is, liberation from the status quo to transform society; and (iii) to improve the non-material or spiritual quality of life, that is, a cultural role. Most of the time we are busy improving quality and attaining parity, which corresponds to the status quoist role. The widespread common school system can be,

and has to be, improved vastly and can offer equally good or even better status quoist education. Neighbourhood schooling is the best, where the cooperation of the parents can be easily sought. It dispenses with the necessity of children travelling to school. Walking to school improves the health of not only the children, but also the parents who walk with them. It builds a better-knit neighbourhood community.

The liberating role of education can seldom be incorporated into the formal curriculum because the role of the state is to maintain the status quo. Teachers have to smuggle liberating education into the curriculum through classroom transactions. The working class per se can initiate a revolution, but the creative participation of the people is necessary to maintain and advance it. Only a generation imbued with the vision of and craving for a new society can do this, which has to be inculcated in children at a very early age, and only teachers can do it. So, based on this, I formulated the viewpoint that teachers had to play the main role in building a new society, and in engendering and maintaining the social revolution.

The current education system creates two classes of citizens. One trained and educated to lead and exploit, and the other destined to lament and waste away. The working class is becoming increasingly less capable of initiating a revolution. They see revolution only as capturing state power. Liberating individuals and small communities from state power is not something they are able to think about. Teachers can educate and organize the community through their students. So, I coined the slogan 'education for social revolution'. Teachers in the KSSP are not ready to accept this slogan. Revolutionary slogans are all right for them, but not revolutionary action. Though the KSSP has created such phrases like '*Padhanam Paalpaayagam*' (joy of learning) and '*Adhyaapanam Athimadhuram*' (joy of teaching), they have not captured the imagination of sufficient

number of teachers to initiate a chain reaction. I firmly believe that the seeds of social revolution have to germinate in classrooms through teacher–student interactions.

Science and Culture Jatha

The year 1977 was yet another milestone in the history of the KSSP. The first Kerala science and culture *jatha* of the KSSP took place that year. Some time after the fourteenth annual conference, held on 11th to 13th February 1977, a meeting of the KSSP activists was held on the terrace of Trivandrum Hotel to plan activities for the year. PTB was presiding. Kochunarayanan came up with the idea of organizing a state-wide *jatha* from Kasaragode to Trivandrum with the slogan ‘use Malayalam for administration and education’. The debate on the medium of administration was taking place at that time. The KSSP argued for mother tongue as the medium and many wanted that to be theme of campaign.

I was more interested in energy then. In a paper presented in April 1975 at the tenth annual conference of the Kerala State Electricity Worker’s Association, I had argued that though currently surplus, by 1983 there would be electrical energy shortage, and thus coal-based thermal stations were the only alternative. Large-scale import of coal, as indicated in the book *Wealth of Kerala*, could develop a cascade of industries. I argued for a *jatha* with the singular theme of ‘developing a coal economy for Kerala’, but did not manage to convince my colleagues. C.P. Narayanan suggested that instead of one slogan, the *jatha* could have several slogans like ‘governance and education through Malayalam’, ‘science for social revolution’, ‘industrialize or perish’, and ‘labour power—the greatest wealth’.

In the third activists' camp held at Kaladi, 13th to 15th May 1977, the details of this *jatha* were worked out. It was agreed that the *jatha* would be inaugurated at Kooveri, the village where the first RSF was formed in 1974, and culminate at Poovachal in Trivandrum district. Both villages were non-electrified then. This *jatha* was by far the biggest mass contact programme the KSSP had undertaken till then. It travelled several thousand kilometres, interacting with nearly half a million people at about 900 *jatha* reception points. C.G. Santhakumar was the captain of the *jatha* and I joined it for three days in between. The slogans were gradually evolving into poetic compositions (from *Mudravakya* to *Mudrakavya*). I still remember vividly that night in October after the *jatha* reception at Peroor in Palakkad district. SPN (S. Prabhakaran Nair) and I, post dinner at Unni Nair's house, sat together to enrich the slogans with new ones, turning them into a narrative and getting them printed. Thus was born *Sastrageetham* with the famous lines, 'science is labour, labour is wealth, wealth is for the welfare of the people, science is for the welfare of the people'. It was printed in two days and made available throughout the rest of the *jatha*.

If one were to list the most effective tools used in the history of mass mobilization, the *kala jatha* would occupy one of the top ranks. The first Sasthra Kala Jatha of the KSSP took place three years later in 1980. However, without the experience of the 1977 *jatha*, the KSSP would have never ventured into it. There were, of course, two more contributing factors, namely, the experience of the science and art camp held at Anappuzha near Kodungalloor, and the experience of the May Day Academy and Chorus Theatres organized by Chintha Publishers. Combining all these, I proposed to conduct the science through art *jatha*, that is, the Sasthra Kala Jatha.

It was inaugurated on 2nd October, the birth anniversary of Mahatma Gandhi, and culminated on 7th November, the birth anniversary of C.V. Raman as well as the anniversary of the Russian Revolution. This period of thirty-seven days became the *jatha* slot for a long time, not only in Kerala, but also throughout India.

The Malappuram district unit of the KSSP, under the leadership of M.S. Mohan, took the initiative to write new scripts, select from existing ones, etc. Here, particular mention must be made of Panangad Thankappan Pillai, the village poet. A peasant educated only up to class four, he had the exquisite talent of translating scientific and social ideas that we presented to him into folk art forms. He contributed several scripts to the first and subsequent *kala jathas*. The *kala jatha* performed three distinct functions: (i) communicating science-facts and attitudes, particularly at an emotional plane; (ii) organizing people through the formation of reception committees and pre-*jatha* activities, and attracting new activists; as well as (iii) acting as a massive campaign for the sale of books.

From 1980 onwards, the KSSP started conducting *jathas* every year. In 1983, it went to the Kanyakumari district of Tamil Nadu. In 1985, it organized an all-India *jatha*, and finally in 1987, it organized the Bharat Jan Vigyan Jatha, which gave birth to the All India People's Science Network (AIPSN). *Kala jatha* was effectively used to create a festive environment for total literacy and to form tens of thousands of local-level committees to carry out the Total Literacy Campaign (TLC) campaign. Later, besides national *jathas* like the BJVJ, BGVJ, BJGVJ, Samatha Jatha of 1993, Hamara Desh Jatha of 1994 and Peace Jatha of 2003, thousands of state, regional and district level *jathas* started being organized throughout India. It was the *jatha* tool, coupled with the exciting experience of the TLC in the Ernakulam district, that ultimately gave birth

to the national-level TLC that mobilized nearly 120 million volunteers and 1,200 million learners.

Kala jatha is a group of artistes that sings and performs in streets and in halls. It is both a street theatre and a proscenium theatre. The uniqueness of the *kala jatha* lies in the variety of its forms, diversity of its themes, conciseness of each item (ten to fifteen minutes) performed, its contemporariness and its complementariness with other forms of communication. It had the experiences of political theatres like the Indian People's Theatre Association (IPTA), Kerala People's Arts Club (KPAC) and Deshabhimani Theatres as the main source of inspiration. It also rested on the experience of organizing a science and culture *jatha* from north Kerala to south Kerala as well as my own personal experience of organizing the May Day Academy and producing Bertolt Brecht's dramatic adaptation of Gorky's *Mother*.

Each year, the *kala jatha* was planned as a complementary programme to reinforce the ideas we had presented before the people during that year on the environment, education, health, superstition, atrocities on women and so on. Our budget for organizing the *kala jatha* was very low since our only source of income was the sale of books published by us. Book selling became an important element of the *kala jatha*. The meticulous logistical planning that we did for the first *kala jatha* of 1980 paid us a number of unexpected dividends. The *jatha* route was planned months in advance together with the district leadership, who fixed the daily reception and performance locations in their respective districts.

Large organizing and reception committees were set up in each location. These committees consisted of the KSSP sympathisers, activists of mass and class organizations and new people who were curious about the KSSP. These committees took the responsibility of selling books. During the first *jatha*,

the target was to sell books worth Rs 500 in each *jatha* centre, and we managed to make Rs 3,000 to 4,000 every day. The target sale per centre was raised every year.

Performance used to happen in four of five locations daily. Each performance, consisting of skits, choreographed songs, song dramas, etc., would be selected from a repertory of around two hours and would last for about forty-five minutes. The *jatha* activists were given boiled herbal water at each point. They were fed only homemade or specially prepared food, not hotel food. The formal reception consisted of handing over the proceeds from the sale of books to the manager or captain of the *jatha* by the chairperson or secretary of the local organizing committee. By the time the *jatha* would get over, we would either set up a group or a proper unit of the KSSP at the reception locality. In this way, *jatha* turned out to be a powerful organization-building tool.

Later, when *kala jathas* were organized in other states or when they were organized as part of the TLC, government funding was relied upon. Local contributions became comparatively very small. However, for the BJVJ and the BGVJ, local organizing committees were set up, about 300 in the case of the BJVJ and about 30,000 in the case of the BGVJ. These local organizing committees served as the seeds of the future organization. The result is that today, almost all states have a People's Science Movement (PSM) organization and some sort of mass membership starting from a few hundred to tens of thousands. In all, the PSM had about 15,000 units with a total membership of nearly six to seven lakhs. In 2003, we were able to organize a huge national programme, the Peace and Solidarity Jatha, without any substantial funding from any source. Now, almost all districts know about *kala jathas*, most of the NGOs too know about them and it has become a tool for creating a mood and for IEC (information, education and

communication). One TLC in the Chittoor district of Andhra Pradesh organized 400 *kala jatha* groups.

During the initial years, till 1990, I participated in all the *kala jatha* production camps of the KSSP and used to offer my suggestions as a senior member from the audience. My role involved making minor changes in the scripts to bring it in consonance with the views of the organization, like inserting commas and full stops and changing the sequence of the presentations so that the entire meaning was drastically altered. I too tried my hand at script writing. The criticism that there was no science in the first science *kala jatha* bothered me and I wrote a few poems and one skit. The title song of the KSSP, 'Vishvamanavan', was one of them. The others were 'Oh! Universe' and 'E= MC²' and the skit was 'One Corpse and Four Scientists'. I was better at suggesting themes in detail than others could write. Thus came the poems, 'Thumb of Ekalavya' and 'Cry, My Sacred Land'.

Humans and the Environment

The souvenir published for the fourteenth annual conference of the KSSP was in the form of a book. The conference was conducted strictly as a business meeting because of the sudden demise of India's president, Fakruddin Ali Ahmed. The inaugural address was unique in character as it was a musical composition. Well-known singer Kaviyoor Revamma inaugurated the function with a befitting song. The souvenir book, *Man and Environment*, was the first systematized exposition of the KSSP's growing environmental consciousness. The 'three environment' concept, dividing the environment into physical-biological, economic and socio-cultural environments, was first expounded at that seminar. It espoused that

the human–nature relationship is governed by the human–human relationship, which in turn is reinforced or questioned by cultural factors. The idea was that the human–nature relationship (science and technology) is different in different societies—feudal, capitalist and socialist.

Later, I became convinced that just like the human–human relationship affects the human–nature relationship, the reverse is also true. We cannot have a truly socialist society with the human–nature relationship if the production technology remains the same as that in capitalism, with giant-sized plants, mega-metropolises, and decision-making far removed from workers who produce. The diehard mechanical Marxists disagreed with this formulation. They argued that the human–human relationship, that is, economics, was the central one and the rest were its derivatives. That polemic still continues unresolved.

Meanwhile, a few months after the fourteenth conference in Quilon, at the third activists' camp held at Kaladi, an unusual resolution worded by Professor M.K. Prasad was presented in absentia for approval. The salient content of the resolution was that the Kerala government had in right earnestness started the implementation of a hydroelectric project in the Silent Valley. Since the Silent Valley forests were unique and unusually rich in biodiversity, the resolution demanded that the government withdraw the project. Almost all of us present were quite ignorant about ecology. PTB strongly opposed the resolution, but many of us felt that there was some worth in considering it. The discussion went on throughout the night, right till dawn. In the end, it was decided that a committee would be formed consisting of M.K. Prasad, V.K. Damodaran, K.P. Kannan and K.N. Shyamsundaran Nair and me to make recommendations. This committee produced its report in 1979.

Meanwhile, the KSSP adopted a resolution requesting the government of Kerala to not do anything irreversible in the Silent Valley until further studies about the rich flora and fauna were conducted or the project became the last resort. In the years that followed, Kerala witnessed a bitterly fought polemics between development fundamentalists and genuine environmentalists. The category of environmental fundamentalists appeared much later. One result of the four-year long polemics on the Silent Valley project, and on ecology in general, was the development of a high environmental consciousness amongst the people of Kerala. The KSSP could internalize the concept of ecology because of its early involvement in the environment from 1973 onwards, although it was mainly related to water and air pollution.

Since it was already engrossed in development-related environmental issues, it was logical for the KSSP to undertake a study of the eco-economic impact of the massive Kuttanad Development Scheme, consisting of the Thanneermukkam Bund, Thottappilly Spillway and permanent bunds around paddy fields. This was at the request of the activists of the Kottayam and Alleppey districts. The fifteenth annual conference of the KSSP was held at Kottayam on 10th to 12th February 1978, where the Kuttanad Report prepared by K.P. Kannan, K.N. Shyamasundaran Nair and others was presented at a special session. The conference souvenir book was developed on technologies appropriate for the people.

First Conference of People's Science Movements

The KSSP's contacts with other groups in India had been steadily growing. There were several observer participants at

the KSSP annual conferences from the eleventh conference onwards, and the fifteenth conference was no exception. Dr K.N. Raj had persuaded K.P. Kannan to publish an article on the KSSP in the *Economic and Political Weekly* some time ago, because of which several organizations began contacting the KSSP. The idea of holding a conference of all such kindred groups began to take root within the KSSP. The relationship between the KSSP and the Kerala State Planning Board had already become very active during the production of *Wealth of Kerala* and its adoption as a source material for the training of block development officers. Dr P.K. Gopalakrishnan, the secretary of the planning board was enthusiastic about it and promised help. Dr K.N. Raj offered the cooperation of the Centre for Development Studies. 'Kindredness' was defined to mean certain shared positions on issues, for example, partisanship to have-nots, to the use of science and technology, in general knowledge, in the favour of the have-nots, etc. Discussions about the collective name for these organizations led to K.P. Kannan suggesting 'People's Science Movement', which was unanimously accepted.

The First All-India Conference on People's Science Movement was a roaring success. About 150 delegates from more than thirty groups participated in the three-day conference held at the CDS, on 10th to 12th November 1978. Formal education, non-formal education, emphasis on research and development work related to basic requirements like food, shelter, employment and health-care delivery were some of the issues that were discussed at the conference. However, the hottest debate took place around 'development'. A large number of organizations that participated in the conference held views that were similar to E.F. Schumacher's 'small is beautiful'. P.N. Haksar, who was stoutly opposed to it, declared: 'small is ugly; only large is beautiful'. He was a promulgator

of the Soviet brand of socialism. Dr Anisur Rahman of the International Labour Organization, who was economic adviser to the Bangladesh prime minister, Mujibur Rahman earlier, was supposed to be a special participant at the meeting. He got delayed and had to go back from Bombay. Later, he visited us at the Centre for Development Studies in Trivandrum and was quick to recognize the ideology of the KSSP.

Today, we all claim that the KSSP has a clear social objective: to use science and technology consciously to create an environment conducive to social change. Then, we were becoming increasingly concerned about the lack of sharpness in our own worldview and ideology. A series of internal discussions about the KSSP's ideology was initiated in the fifth Workers' Camp held at Thavanur and in the subsequent state executive committee meetings.

It is strange that even after nearly three decades, we continue to debate our ideology. In one way, it is a positive sign, an indication of vibrancy within the organization that we are not tied down to a fossilized ideology. However, the collapse of the 'socialist states' of Eastern Europe and, even before that, the ascent of Deng Xiao Ping who advocated an almost capitalist road (as Mao called it) to socialism, had severely jolted our complacency in ideology, which left ideological thinking mostly to the political parties.

The elections held in 1978 at the end of Emergency brought the Janata government, though for a short period of time, at the helm of affairs in New Delhi. The governments till then had failed to realize the constitutional mandate to provide free and compulsory education to all children in the age group six to fourteen years by 1965. When the new government assumed office, there were more illiterates in the country than its population at the time of Independence, and eradication of illiteracy became a major agenda of the government.

The KSSP had been active in the education of the common people essentially through the print media, but it was becoming increasingly obvious that a large mass of people were illiterate and unable to make use of it.

In the annual activists' camp held at Malampuzha in 1977, a separate committee was set up for literacy-related activities with O.R. Raman as its convenor. In 1978, the committee prepared a project report to make Kerala 100 per cent literate in five years. By that time, several RSFs had already been established and were involved in literacy in some places. However, they could not initiate the chain reaction necessary for a campaign.

Around this time the central government announced the National Adult Education Programme (NAEP). In Kerala, a state-level committee was formed to implement the programme, in which C.P. Narayanan represented the KSSP. The NAEP was built on what was called the centre-based format, where one volunteer would teach thirty learners in one centre for ten months, for a monthly honorarium of Rs 75. In Kerala, the programme was implemented through the rural development department. Apart from the centres run by governmental agencies, NGOs too were persuaded to run adult education centres. Naturally, the KSSP initiated a few centres too, for example, Ezhukon in Quilon district.

Soon it became clear that most of the centres run by NGOs and GOs (governmental organizations) were only on paper and the grants were being misappropriated. Several new NGOs came into existence to take advantage of the situation. The KSSP did not want to be associated with these organizations because it was worried about its own reputation. Some time towards the end of 1978, I went to New Delhi to attend a meeting organized by the Directorate of Adult Education (DAE), whose director was Dr Jalaluddin. We were both pleasantly surprised when we realized that we were contemporaries in Moscow

while pursuing higher studies, but unfortunately we never met there. Soon we were bonding. He too was left-oriented. Later on, during a chat he told me how the whole intellectual sphere was dominated by imperialism, how its agents were providing research funds, setting the research agenda and how our researchers were falling for it. He estimated that an amount between Rs 1 and 1.2 billion was coming to India through various research institutions. He also expressed his despair at the CPI and the CPI(M) leaders, with whom he had discussed all this and who were not taking it seriously. Soon, the Indian academic field would become pro-capitalist and pro-imperialist. What Dr Jalaluddin said became painfully apparent during the General Agreement on Trade and Tariffs (GATT) debate. Most of our intellectuals had come to believe that 'there is no alternative (TINA)' to capitalism or 'this is the best alternative (TIBA)'. It was during this meeting in Delhi that I met Mrs Swaminathan, the founder of Mobile Creche.

From the DAE meeting I went to the education ministry to meet Anil Bordia, who was the joint secretary in charge of adult education. When I started introducing the KSSP, he stopped me and said that he knew the organization very well. In fact, he showed me an article he had recently written on the KSSP in a Hindi newspaper published from Jaipur. One of the reasons for my visit was to warn him about the degeneration of the adult education programme in Kerala. He read out to me the list of NGOs from Kerala that had been recommended for grant and promised that he would enquire into the genuineness of all the organizations about which the KSSP had doubts. I told him about the ones I was suspicious. My other reason for the visit was to request concessional printing paper to print the KSSP's books. For this, I was directed to Prasanna Patnaik, another joint secretary, who gave me an allotment of a few tonnes of paper. My friendship with Anil Bordia continued till his death

in 2012. His faith in the KSSP was immense. Our friendship became stronger during the days of the New Education Policy (NEP) and the National Literacy Mission (NLM).

The KSSP withdrew from the adult education programme soon after, but the experience gained came in handy later. The KSSP did not prepare any primer for the learners, which was left to the creative ingenuity of the teacher-volunteer. But it did prepare a few handbooks for teacher-volunteers to enable them to facilitate discussions. One of the topics was geography, which started with a discussion on soil, a subject familiar to the learners. Another subject was history, which was written on the lines of the class on society in the 'Nature, Science and Society' series.

It took the KSSP only half a decade to return to literacy. During the twenty-third annual conference held in Eranakulam in 1986, the KSSP adopted a resolution to make Kerala totally literate within a period of five years. Professor M.K. Prasad was designated as the commander-in-chief of a grand Kerala literacy army. A project proposal was made, strictly on the lines of a crusade against illiteracy, with a C-in-C, field marshals, major generals, brigadiers, platoon commanders, combat units, etc. Of course, the education ministry in New Delhi was as yet unprepared for such an action, which changed a couple of years later with the setting up of the NLM. I will discuss that story in more detail later. For now, it is enough to know that Kerala was declared totally literate on 18th April 1991, within the five-year limit set by the KSSP.

Party Congress Delegate

After the Emergency was lifted in 1977, and with the Janata government at the centre, the CPI(M) was in a position to

hold its long delayed Party Congress. The tenth Party Congress was held in Jalandhar during February 1978, to which I was a delegate by virtue of my position in the party publication and education division. By this time, my book on dialectical materialism had been accepted as the standard textbook for Marxist philosophy and I was accepted as an accredited teacher.

My experience at Jalandhar was not the least exciting. There were a few hundred delegates from Kerala, and being selected as a delegate to the Party Congress was a big honour, but most of the delegates were in a holiday mood. One could not blame them because the structure of the Congress was not at all conducive for creative participation. Not even state committee members had much to say. The Polit Bureau (PB) and the Central Committee (CC) dominated the Congress, while the delegates contributed very little.

Despite this, a number of side discussions of similar interest groups were being organized. I organized a meeting of those who might be interested in science popularization, in which about twenty to twenty-five delegates participated. It did make some impact on the delegates from West Bengal but not the other states. I experienced the taste of 'democratic centralism' directly. The ideological conflict within the party resulted in the resignation of P. Sundarayya as general secretary, who was replaced by EMS. Later, I read documents indicting P. Sundarayya for not knowing the ABC of Marxism. These accusations were mostly baseless.

May Day Academy

Comrade Aniyan (E.M. Sreedharan), and more than him, Comrade P.K.R. Warriar had been suggesting for a long time that the left movement revive its theatre tradition. After

returning from the tenth Party Congress, Comrade Kochanuja Pisharody and I organized a fifteen-day May Day Academy in Thrissur for new dramatists, artists and directors to promote progressive theatre groups, which was led by Prasanna from Samudaya group in Karnataka and Professor V. Aravindakshan. The academy was quite productive, and P.M. Taj was one of its products. Later that year, we started the production of Gorky's *Mother*, dramatized by Bertolt Brecht, under the banner of Chorus Theatres. Initially my job was to help in logistics, but I soon found myself working as the manager of the troupe.

My involvement with stage performances dates back to my primary school days in Namboodiri Vidyalayam. I was only eight years old and in class four. Those were the heydays of the Namboodiri reform movement, whose youth wing was called Yuvajana Samghom. Whenever an occasion presented itself, the Samghom would put up a play or a skit, and I would be their messenger. Later, since I would attend the rehearsals quite regularly, I became the curtain boy, and from there, graduated to a prompter. I never came on the stage. Occasionally I read scripts, offered suggestions and gave my opinion (often unsolicited) on casting too.

I continued to be involved in theatre in the same way during my college days. After that there was a gap of a couple of decades, and I came back to it only in 1978 with the May Day Academy. Then came Chorus with the production of Brecht's *Mother* in Malayalam. This time, I was both manager as well as a critical spectator.

The *kala jatha* of the KSSP was the pinnacle of my involvement with performances. Starting with the first *jatha* of 1980, for about a decade, I was always present in the rehearsal camps, subverting scripts and showering comments. For all these misdeeds, I was punished at the age of seventy-two by my

friend Shaji N. Karun, who persuaded me to play a short role as EMS in his docu-fiction on AKG. It was preposterous for me to play him, yet I had to do it.

One song from *Mother*, 'In Praise of Learning' became the title of the KSSP *Jatha*, and later, of the literacy movement throughout India. All the songs were powerful, many of which were used for electioneering, for they were effective in attracting the masses. All these experiences developed into the concept of the Sastra Kala Jatha. I still remember a lonely veranda in S.N. College, Quilon, where I tried to convince Professor V.K. Sasidharan (VKS) to tune the songs for *Mother*. He was very hesitant and said that he had already burnt his fingers in the field of theatre and cinema, and didn't want it to happen again. Somehow I managed to persuade him, and later he was quite willing to lead the *kala jatha* as captain with P.G. Padmanabhan as manager.

The *kala jatha* dates had been consciously selected to symbolize the desired trajectory for Kerala—from Gandhi to the Russian Revolution. The skits, which dealt with issues that the KSSP was handling at that time, were composed by different people in different places. There were songs, short one-act plays and dance dramas in the repertory. The actors were academics like VKS, Dr M.R. Gopinathan Nair and Dr Thankapan on the one hand and peasants and artisans like Kulanada Vasu and Panangad Thankappan Pillai on the other. They were all KSSP activists, but came from completely different academic and social backgrounds. The final ten days of rehearsal took place in Trivandrum in my house, which I had already vacated to accommodate the Social Scientist Press.

In the *Jatha*, Padmanabhan was nicknamed 'Padmanabhan, the Rough' because he was very strict with the local organizing committees and insisted that they pay in advance for

the books entrusted to them. This helped to create a sort of financial discipline in the KSSP. Over the years, this discipline got eroded because subsequent finance managers were not 'rough' enough.

Chorus

PKR and Aniyan approached the CPI(M) state committee with the idea of establishing an All-Kerala People's Theatre. Apparently, the state committee was not very impressed and EMS suggested that they start modestly and confine themselves to the Trivandrum district. PKR, Aniyan and I became the think-tank to figure out the details of the group that was to be set up: what would be the name of the group, what would be its first production, who would direct it, and so on. I suggested the name Chorus as well as designed its logo, which I later found out resembled the UNESCO's logo. PKR became the president, Aniyan the secretary and I became the manager, that is, the organizer of odd jobs. We already knew Prasanna well, as Samudaya had produced Brecht's *Mother* in Kannada and ran it for more than a year. The troupe still had the costumes with them, who promised to lend them to us as well as help with the Malayalam production. It was both theatrically and politically a powerful drama, and we slated it as Chorus's first production.

Punaloor Balan translated the songs into Malayalam and VKS directed the music. It was news to me that he and Balan had been involved in creating songs and music for films. Pendumom (as we used to call P.N. Damodaran Pillai) translated the English script into Malayalam as well as directed the play with the basic framework provided by Prasanna.

The production process took about three months. Properties other than costumes were quite expensive, for which

Chintha Publishers advanced the money. Soon I found myself performing the roles of secretary, treasurer and manager. Since I had been present for more than 90 per cent of the rehearsals, almost all responsibilities fell on me. The role of the mother was played by Manacaud Usha, a sincere and competent, though not very well known, actress. The seriousness with which she undertook this responsibility was commendable. Her dedication was not of a paid artiste, but of an earnest communist, despite her not being a party member.

As is natural for any play, the first presentation at the Karthika Thirunal Hall in Trivandrum was not a great success. The few party leaders who had been invited for the performance could not see its potential, only the deficiencies. There was little encouragement in the review published in the CPI(M) daily, *Deshabhimani*. No party committee came forward to sponsor the drama anywhere. The organizers and actors were dejected. Chintha Publishers had, by that time, already invested about Rs 50,000 in it, money that needed to be recouped. I frantically began to get in touch with everyone I knew in Kerala—my KSSP friends, party friends, personal friends, relatives—to book tickets. There was another reason to do this. All the artistes, particularly Usha, had put in so much effort and emotion into the play that I felt it my duty to provide at least a couple of dozen stages to them. We finally managed to obtain about thirty stages and repay the money Chorus had borrowed from Chintha, though through other means. This was Chorus' first and last production, after which it shut down.

Like I said before, the songs in the play were quite powerful. There were nine of them, all deeply political. We made use of them during the campaigning for the assembly election in 1979. EMS did a statewide election tour. In each place, his speech was preceded by an announcement that books were available for sale outside, followed by a few songs from *Mother*,

sung by V.K. Sasidharan and his team. They sang five or six songs from the play while awaiting EMS' arrival. People liked the songs very much and applauded enthusiastically. In this way, we managed to reach the content of Brecht's play to many more people through the medium of songs than we could with the full play.

After a decade and half of procrastination, elections to the local bodies (gram panchayat and municipality) were declared once again in 1979. The KSSP decided to use this occasion to take its view on development to the people and their representatives. A booklet called 'A Development Perspective for Kerala' was prepared, based on the *Wealth of Kerala*. A programme was charted out to make the booklet a discussion point amongst candidates before the election and with the elected members after the election. This could only be done in some panchayats. The view that the development of a panchayat and improvement in the quality of life of the people should not suffer from petty party or personal squabbles was presented before them. Some were public meetings while some were within the panchayat board.

The necessity of a technical support group to the elected panchayat body was becoming evident. The KSSP envisaged the RSFs satisfying this need. It prepared a booklet entitled, 'The Rural Science Forums Should Become Informal Panchayat Planning Boards'. The seeds of panchayat-level planning, technical support groups and other initiatives can be seen in these activities of the KSSP during 1979–1981. They blossomed a decade and half later with the PPC. The idea of setting up a rural academy had already taken root within the organization since the thirteenth annual conference at Kannur, and the need for such an institution was becoming increasingly urgent. However, it took another decade for it to emerge in the form of the Integrated Rural Technology Centre (IRTC) at Palakkad.

Silent Valley Polemics

Though in the 1977 activists' meet at Kaladi we could not take a stand on the Silent Valley Hydroelectric Project (SVHP), within a year we arrived at a consensus to oppose the project. The group set up by the KSSP studied the reports of Zafar Fatehully, the Kerala Forest Research Institute, Zoological Survey of India, Botanical Survey of India and others, and came to the conclusion that the Silent Valley forests were genetically priceless and needed to be safeguarded. My own studies on Kerala's future energy requirements, as chairperson of the steering group on total energy planning of the Kerala State Planning Board, convinced me that the SVHP was not unavoidable, but larger thermal stations were a must. In fact, the central government was willing to give a 200 MW thermal station in lieu of the SVHP, which would have given three times more energy than the SVHP. But the Kerala State Electricity Board (KSEB) rejected the suggestion because what they wanted was not energy but dams, civil construction, contracts, posts and kickbacks.

For nearly three years, the polemics went on. In almost all high schools and colleges, debates were held for and against the project. Some people of Mannarghat formed a Silent Valley Project Protection Committee. The land value in Mannarghat town had already soared and there were vested interests in the real estate, contractors' and engineers' lobbies. Almost all political parties were vertically divided on the issue. International opinion from International Council of Scientific Unions (ICSU), Smithsonian Institute, etc., came in support of the KSSP's stand. The engineers' and workers' organizations in the KSEB declared themselves as opponents of the KSSP. The magazine, *Electricity Worker*, published by the Centre of Indian Trade Unions (CITU) affiliated to the KSEB Workers'

Association, ran a tirade against the KSSP. It called ecology a pseudoscience concocted by imperialism. On the cover of one particular issue, they had a cartoon of Thomas Isaac and me showing us receiving money from the CIA. Almost a quarter of a century later, the same allegations were made against the same people, but this time for our involvement in decentralization and the PPC, which they argued was a World Bank inspired treachery to destabilize the state. The *Paadhom* group spearheaded the latter attack and was supported by the same old CITU group.

Coming back to the SVHP, people's opinion was overwhelmingly against the project, so also scientific opinion. At last, after much effort, the central government refused to sanction the project. In the process, the people of Kerala became highly environmental conscious. The opposition to the destruction of the Silent Valley forests was based on a scientific understanding of its future value and not on a direct experience of any harm. Nobody had to be ousted because the forest was pristine and didn't even have tribal settlements. The local people argued for the project and vested interests wanted the project to be implemented so that their land value could appreciate and they could plunder the forest.

A completely different type of struggle was going on in Mavoor, near Calicut, on the banks of the Chaliyar river. The Gwalior Pulp and Rayon factory of the Birlas, which produced paper and pulp, had been polluting the Chaliyar river for a long time. The people living on the banks of the river, particularly of the Vazhayoor panchayat, were the worst hit. Downstream, the river had no life left in it. Drinking water wells had been destroyed by pollution and the people were suffering from respiratory and stomach ailments. They had been pressurizing the company to treat their effluents and to not let them into the river. The management turned a deaf

ear to them and no political party was ready to help. Even the left parties argued that pollution was the price one had to pay for development. The only support the people had was from the left extremists. Meanwhile, some time in 1978, a team of scientists from Calicut University detected large-scale mercury contamination in the sediments of the river. The management initially denied it but was later forced to concede. However, they argued that there was no technology available to treat and bring down the pollution levels in the effluents and the choice was between closing down the factory and suffering the 'small' amount of pollution.

The Minamata story of Japan—where methyl mercury that got accumulated in fish was consumed by the local population and led to various fatal diseases—was fresh in the minds of the KSSP activists. The KSSP joined the battle on the side of the people. A large team of scientists and doctors was mobilized to measure pollution levels, seek abatement technologies and conduct health studies. Within a year, the struggling people were armed with enough scientific facts to get a decree in the court in their favour and against the management. It was proved beyond doubt that (i) the factory was contaminating the river beyond levels of tolerance, (ii) the health of the people was badly affected, (iii) there were effective and not too costly technologies to treat the effluents and make them harmless, and (iv) the company was refusing to adopt those measure only because it would cut a bit into its profit margin.

The factory was closed and the workers were thrown into the streets. After some time, the factory installed an ineffective pollution abating system, which they seldom operated. The river went back to its earlier condition of being poisonous. In the *kala jatha*, this was depicted in a short skit, 'The Poison'. People began to fight more fiercely. This time, the central government came to the rescue of the Birlas and allowed them

to import pulp directly. Finally, the factory engineered a strike by a section of the workers, which enabled them to declare a lockout and the final closure of the factory.

The factory had already become old and the Birlas did not want to invest in it or to renovate it because there was a shortage of raw materials. The development fundamentalists, especially from the left, accused the KSSP for leading the anti-pollution struggle and finally causing the company to shut down. The irony was that a couple of years later, the same developmentalists blindly opposed a factory by Moti Chemicals envisaged to manufacture manganese dioxide in Kannur. The factory, almost 95 per cent constructed, had to be abandoned in spite of the KSSP's stand that, with the assurance given by the company to allow a people's pollution monitoring committee, an almost pollution-free operation was possible. Since then, in Kerala, scientific environmentalism, opportunistic environmentalism and environmental fundamentalism have all got mixed up and 'environmental issues' are often fabricated for personal purposes.

The lockout and closure of the Mavoor factory played havoc with the lives of the workers as well as the Vazhayoor panchayat. The KSSP decided to conduct a detailed socio-economic survey of the Vazhayoor panchayat as part of a larger programme. A.P. Chandran, an extremely mobile and amazingly versatile schoolteacher from the local school and a long-time KSSP activist, led the programme. A survey team of about 150 persons was organized. Each day the team would conduct a detailed survey of one ward, assemble in the evening, clean the data, make a bonfire and organize a festival around it. This went on for ten days, and in the end they came up with different maps of the panchayat. A detailed report of the survey was published in *Gramasastram*. This was the forerunner of the PRM (Panchayat/Participatory Resource Mapping), the PDR (Panchayat Development Report) and even the PPC.

Towards the end of 1978, the CPI(M) held a national plenum at Salkia in West Bengal. This was to enhance ideological clarity after the murky debates at the tenth Congress in Jalandhar. An apparent clarity was generated, but when one looks at subsequent developments in West Bengal and Kerala, it is difficult to say how much of it was internalized. The central committee report to the plenum recognized, for the first time, the PSM as legitimately pro-revolutionary. It also did not fail to recognize that movements such as the KSSP in Kerala were different from other mass movements like the DYFI (Democratic Youth Federation of India) and SFI or class organizations like the CITU and AIKS (All India Kisan Sabha). The report documented that the KSSP was a genuine progressive movement. Its members subscribed to different political parties and visions. There were CPI(M) members in the organization, but it was not CPI(M)-led. The KSSP called upon the members of the CPI(M) who were in leading positions in the organization to take it along the path of revolution. However, it had already taken that decision more than half a decade ago.

A need was felt at the ground level of the party for a standard textbook on dialectical materialism. The booklet that I had written for the SFI in 1972, which was later included in the compendium *Marxism: A Textbook*, was too sketchy and a more detailed version was required. The experience gained through conducting classes on Nature, Science and Society gave me an original structure for the textbook. The expanded version or the full-fledged book, called *Dialectical Materialism*, was first published in August 1976. Since then, it has undergone some revisions and has been reprinted eight or nine times. It was the standard textbook used for all classes conducted within the party on Marxist philosophy till 2004, that is, till my expulsion from the party. They withdrew the book from the market after that.

The initial thirst shown by the party members for party literature began to subside. By 1980, party publications became a supply-driven, rather than a demand-driven, process. Once when I was travelling from Trivandrum to Alleppey with EMS and E.K. Nayanar, I discussed the subject of education within the party with them. I observed that there was no real demand for Marxist books by the party members, and pointed out that there was a lack of enthusiasm to read and study. A similar criticism about the Kerala party had already come up at the Salkia Plenum in 1978. When I referred to that, Comrade Nayanar did not understand my point. He wanted to know what I wanted.

EMS replied, 'The Kerala party is fortunate to have such a large body of Marxist literature in Malayalam, but the party is not making use of it. This is the essence of the Salkia Plenum criticism.'

Later in 1982, I had to make my observation even sharper. This was immediately after the election that followed the collapse of the first Nayanar ministry. In that election, the Left Democratic Front lost. When I visited the CC office for some discussions, Comrade BTR, on seeing me passing by his room, called me in. He wanted to know why we had lost the election.

I said: 'Comrade, let me put it in very simple terms. If *sambar* is a little too sour, we still have it. But if *kheer* gets even a little sour we throw it away. People's expectation from the Congress and us are different. I can put it another way too: Kerala has a very big communist party, a weak communist organization and only very few communists.'

BTR smiled and said: 'No, Parameswaran. You are exaggerating. This time you were defeated by your head-load workers.'

It may have been an exaggeration then, but it is probably an understatement today.

By the early eighties, I began to feel that Chintha Publishers had ceased to perform any real political function. Its only reason to exist was the sustenance of its employees. The two profit-making book stalls at the Eranakulam and Calicut KSRTC (Kerala State Road Transport Corporation) stands were selling ten times more anti-party literature than party literature and were sustaining the system. This was a ludicrous situation. Thus, Comrade Pisharody and I conceived of a programme called the Political Learning Festival, which was a new concept and was organized at the area committee level. Envisaged as a three-day festival, it was a course on various aspects of Marxism, imparted to area committee and local committee members, about 100 in each area.

The faculty was really high profile. After five in the evening, the entire class would split into groups of three and visit the nearby houses with books in hand as part of a door-to-door book sales campaign. In one of the classes, we would explain the contents of those books to our leaders so that they could talk to the public intelligently about them. The first festival held by the Eloor area committee was a huge success. Books worth Rs 50,000–60,000 were sold. The second festival at Valappad, Thrissur, and the third at Attingal, Trivandrum, were successes too. We rejoiced that we had found a new way to take Marxist literature to the party members and the public.

But it seems we had celebrated too soon. The fourth festival held at Charummoodu, Pathanathitta, was a flop. A substantial portion of the money for the books sold by the area committee was never paid to Chintha. My repeated requests to use more aggressive techniques, like doing *dharna* before the local committee office, were turned down. Soon, the entire festival degenerated into a simple books sales campaign, and the aspect of learning politics was dispensed with. I began to feel that I was wasting my time, and so, I requested the party

to relieve me from the responsibility of handling publications in 1987.

There were two other reasons—personally unpleasant to me—which prompted me to take this decision. The hostility of the CITU wing of the party generated during the Silent Valley controversy was still smouldering. A whispering campaign was launched against me that claimed that I had been misappropriating funds. I was the only party member in Chintha Publishers, but all of a sudden the party decided to put a senior comrade in charge of the press. I would have welcomed this move had the context been different, but given the circumstances at that time I felt the party no longer had confidence in me. This caused me quite a bit of hurt.

The other incident that led me to my decision was that my cousin was getting married and I was partly financially responsible for her wedding arrangements. I informed the party that I would need about Rs 3,000 from Rs 8,000 due to me as royalty for this purpose. There was more than enough money in the bank, but they did not listen to my request. I didn't enjoy politicking, and so decided to free myself from the party wages. They were not too unwilling to relieve me either.

Around that time, I had been busy with—I talk about these later in the chapter—the Ashmoh Cement project supported by CAPART and later with the setting up of the IRTC. By mid-1988, I became fully immersed in literacy work, which I continued till recently. Thus ended twelve years of my full-time association with the party. Looking back, I do not feel any regret. I had the opportunity to participate in party congresses at Jalandhar, Vijayawada, Calcutta and Trivandrum. I had become intimate with several politburo and central committee members, including BTR, Basavapunnaiah, EMS, Prakash, Sitaram and S. Ramachandran Pillai (SRP). The last three,

even after I was expelled from the party, did not consider me an enemy.

I still wonder how I was able to support my family with an honorarium of Rs 900 to begin with, which was increased to Rs 1,200 in the last few years. On an average, I was making about Rs 7,000–8,000 a year as royalty. My sons' school and college fees were low and I didn't have to pay any rent, but I still had to try harder to make both ends meet. I managed to provide a good education to my sons, both of whom went to the US for higher studies and job. Arun, who is the older one, did his masters in science. He is married with two daughters aged seventeen and thirteen, and lives in Atlanta in the US. Vipin did a PhD, and after 18 years in the US, he returned to India. He too is married with two daughters aged ten and five, and lives in Bangalore. My wife often tells me that I am lucky to have boys and not girls because of the tensions in bringing up girls. I don't think I would've been any different if I had daughters. They would have grown up in the environment we provided at home, into independent and self-reliant adults and made their own lives. I haven't had a single occasion to regret my decision to choose revolution over security. My life continues to be worth living and worth fighting for—the two things are the same, as Vivekananda put it.

In 1981, the KSSP organized its first proper Parishad School, at the Parishad Bhavan, Pattoor, Trivandrum, in which about forty to fifty people participated. There was a pre-test and a post-test. The 1981 document, *Parishad: The Trails Behind and the Future Ahead*, is quoted even now. It was in that document that we enunciated the meaning of 'science for social revolution' for the first time. We considered it our task to equip the people and all the movements fighting against exploitation and impoverishment with the weapon of scientific knowledge and methods of science. We considered that the

KSSP would continue to be relevant till the time the political movements of the impoverished people themselves began to fulfil the role the PSM was performing then. Thirty years have gone by, but political parties and trade unions continue to be unable to make use of science. On occasion, some of them misuse science against the interests of the have-nots. They are becoming increasingly short-sighted, unable or refusing to see intra-generational and inter-generational injustices caused by many of the so-called development projects. If anything, the PSM has become more relevant today than it was three decades ago.

Today, the reach of the PSMs throughout the country is more than of any other movement, be it political, trade union or cultural. It has presence in 300 to 350 districts, 1,500 to 2,000 blocks and 15,000 to 20,000 villages spread across all states, with a total membership of over six to seven lakhs. There are thousands of members and presidents of gram, block and even district panchayats. These are mostly women, elected on the basis of the work they have done on literacy. Out of the 120 lakh literacy volunteers, at least a one-third can be brought back into action again, if there is a worthwhile cause to excite them and a dependable leadership. The left political movements have far less reach in the northern states compared to the PSM movement.

The KSSP had been, as mentioned earlier, interacting with individuals and groups in other states. One such group was in Karnataka. The first contacts were with scientists in CFTRI, but it did not develop further. Later, we developed liaisons with Professor A.K.N. Reddy of the Indian Institute of Science (IISc.), Professor J. Lakshman Rao and M.A. Sethu Rao. Once I had given a lecture on the PSM in the faculty hall of IISc., which was filled with scientists. Professor A.K.N. Reddy was the first secretary of the Karnataka State Council

for Science and Technology. On his initiative, an organization called Kannada Rajya Vigyan Parishad was formed. I was there for its inauguration on 7th November 1980, at the National College Auditorium in Bangalore. The same day in Thrissur, the confluence of the KSSP's southern and northern *kala jathas* took place, for which I obviously wasn't present.

The KSSP was in contact with the activists of a group in Tamil Nadu called Thedal, which means enquiry in Tamil, and street theatre was one of the tools they used for enquiry. At their invitation, our *kala jatha* team toured Tamil Nadu from 9th to 12th November 1982. The Kerala Club in New Delhi invited our *jatha* team to present programmes from 9th to 13th December 1983. This was done with the initiative of K. Madhavankutty, who was the permanent representative of *Mathrubhumi* daily in the capital and quite an influential person. He arranged a performance before Prime Minister Indira Gandhi, who was very concerned when she saw our people perform bare-bodied and asked them to wear warm clothes. The December cold in Delhi is quite biting and people from the south are not fully aware of its dangers, she told us. But it was quite usual for our people to perform this way and they even did it in the Boat Club Maidan. The KSSP got a lot of real national and international exposure, literally and figuratively, because of this tour!

Research and Development

In 1983, the KSSP took up a formal research project. Two years earlier, we had collaborated with the Delhi Science Forum on a project funded by the DST. It was to conduct a survey of the geographical distribution of artisanal production. From our side, A.P. Chandran and S. Prabhakaran Nair carried out

the work. The results were compiled into a substantial report, in which we pointed out that the classic NBMS (Nodal-Big-Medium-Small) model propounded by Dr Upen Trivedi of the DST was not valid for Kerala. He had argued that rural habitats should be distributed in a particular manner, that is, there would be a cluster of six to eight small villages based primarily on agriculture, with a medium village situated at the centre of those small villages consisting of artisans, particularly the ironsmith who would fix bullock carts, repair farm implements, etc. Six to eight medium villages would have a common, bigger village with markets and other institutions, and there would be a nodal village or town housing major markets, industries, government institution, etc., for each of these clusters of big villages. This would corresponded to our taluka headquarters. In the north, we can still see this pattern. This was the scheme of building a new district that had been recommended by Kautalya in his *Arthashastra*. But in Kerala, the unique character of dispersed habitats and the development of road connectivity made this pattern invalid. The overall pattern may be still discerned, but it has little economic significance now.

Every village is now connected with the district headquarters and communication is no longer linear, that is, from small village to medium to big to nodal. Parallel access to district centres exists now. Kerala's development planning has to take this into account. At that time, neither the DST nor the DSF had propounded any thesis concerning the importance of the NBMS model or the reverse SMBN model for future society. Neither had the KSSP. But, after reading more of Marx and his concept of 'associated producers' as well as the KSSP's own experience with the RSFs, local area planning, local economy, PPC etc., with hindsight, one can conceive of a global network of horizontally linked concentric configuration of 'associated producers'. But this is an idea that is even now just an idea.

In 1981–82, we could not see any relevance of the NBMS model to Kerala. We suggested, however, that Kerala could take up a few research and development projects that had multiple objectives of converting waste to wealth and providing livelihood opportunities. These could be: (i) Ashmoh Cement using rice husk ash and lime ground together; (ii) recycling waste paper; (iii) developing pottery, especially new ceramic models for high efficiency stoves. (We had already been working on high efficiency wood burning stoves from 1978 onwards, with Professor Achutan and A.P. Chandran leading the project.)

Upen Trivedi insisted that the KSSP do projects directly funded by the DST. We had formulated a project on improved *chullahs*, the entire proposal for which was rewritten by Dr Trivedi in a form that was acceptable to the DST. Thus was initiated the Parishad Aduppu Project in 1983. I was the principal investigator, but the entire project was looked after by the Ramabhadran Nair and U. Janardanan.

Professor M.G.K. Menon was then the secretary of the DST. I had known him since the sixties when he was in TIFR. Once I met him at his office in Anusandhan Bhavan to tell him about the KSSP and ask him for his help on a project. He directed me to Dr Joseph John and C.J. Johnny, whom I couldn't meet at that time, but later all of us became good friends. The *chullah* project lasted for about two years in all. The final result, Parishad Aduppu, became quite successful. By that time, the National Programme for Improved Chullahs had come into existence and Agency for Non- Conventional Energy and Rural Technology (ANERT), in the formation of which the KSSP had played a significant role, was the implementing agency.

In 1985, the KSSP submitted a proposal to the CAPART to set up an Ashmoh Cement demonstration plant based on a similar one set up by Dr Bharathendu Prakash at Banda,

Atarrha. CAPART sanctioned Rs 5.6 lakh for the project. Rice mills burn paddy husk to parboil paddy. The ash has no fertiliser value and would be available free of cost. On this basic assumption, the facility was set up at the premises of the National Association for Developmental Education and Training (NADET) in Athalur, Malappuram. The plant has very grim stories associated with it. It was a failure. To begin with, the technology was faulty. Rice husk ash from rice mills could not be used because the husk had to be burned at controlled conditions for cement preparation. It could not be used in rice mill boilers. So, instead of zero cost, the ash would cost as much as the husk. The economy broke down.

The 40-h.p. induction motor that ran the ball mill drew a huge starting current, which neither the starter nor the line could bear. During the day, the mill could seldom be operated because of a lack of electricity supply or due to very low voltage. Even today, low-tension industries in villages are never assured of a power supply. Erratic supply of energy is one of the main reasons for the collapse and closure of many small-scale industries.

NADET was an ambitious project initiated by C.P. Madhavan in association with the KSSP. C.P. Madhavan was a colleague of mine in the BARC. He obtained an LLB degree while in service and was assisting the employees in departmental enquiries and cases. At one time he quit his job and settled down in Athalur, near Ponnani. He also set up practice in Ponnani, which happened to be his native place. He and his uncle suggested that we start a college in the area. I felt that there was nothing special in a college and that we should set up something unique. Therefore, after several discussions, we came up with the idea of a 3-H (head, hand and heart) school to train teachers to use all three Hs in teaching. That's how NADET was born.

A general council was set up, consisting of twenty local people and forty people nominated by the KSSP. About two acres of land was purchased, the entire amount for which was donated by C.P. Madhavan's uncle, V.V. Kunhunni. Two buildings were erected there, one was the Ashmoh Cement demonstration plant sponsored by the CAPART, and the other was NADET. NADET too was a failure since there was absolutely no local leadership available to take charge of it. C.P. Madhavan, who was an active member of the CPI(M), had a falling out with the local leadership and ultimately found his way to the BJP. With the failure of both projects, the premises were abandoned by the KSSP. Madhavan died of a heart attack and soon the NADET became rudderless. In the past decade and a half, several attempts have been made to revive the place but with no success. The machines have been sold and the buildings lie dilapidated now.

Integrated Rural Technology Centre

A village science and technology academy had been one of the dreams of the KSSP since 1977. The idea was mooted at the Kaladi Workers' Camp by M.M.G. Namboodiri and K.V. Raghunath. But their concept was too elementary and non-sustainable, and wouldn't have delivered anything. We had to wait for the right moment for it, which arose after the initial set of interactions with the DST and the successful completion of two projects. My acquaintance with Professor M.G.K. Menon on the one hand, and the confidence C.J. Johny and Joseph John had in the KSSP on the other, led to the idea of establishing a DST-supported, core-funded rural technology centre. Palakkad was chosen as the town where it would be set up because it was the only place where we could

find leadership for it. Professor K. Viswanathan of the NSS Engineering College offered to come on board full-time to establish and run the IRTC. He held the position of director for four years, after which it became necessary to relieve him. I took up the directorship next, followed by Professor M.K. Prasad and Dr P.V.S. Namboodiripad, each of us for a period of one year and all honorary. The centre had to be run by the registrar and later the research coordinator.

As I've mentioned several times, development in its broadest sense was my major preoccupation. I wanted the kind of development that could make India, and Kerala too, a paradise for children. Education, energy environment, decentralized planning, local economy—every sphere of human activity came under its purview. During 1990, I came up with a project proposal to prepare panchayat-level resource atlases modelled after the *Resource Atlas of Kerala*, produced by the Centre for Earth Science Studies earlier. The Natural Resources Data Management Section of the DST agreed to fund it. It was planned as a collective exercise involving experts and ordinary people. We already had the participatory mapping experience of the Vazhayoor panchayat under our belt, and we now wanted to add the expertise of the CESS scientists to it. Luckily, the new director of the CESS, Subrato Sinha, formerly deputy director-general of the Geological Survey of India, was more than willing to collaborate with the IRTC. I had a small role in persuading Subrato to come to Kerala and take up this assignment.

Though the project was originally sanctioned for the IRTC, on our request it was transferred to the CESS, with Subrato Sinha as principal investigator and Professor M.K. Prasad as co-principal investigator. Subrato managed to mobilize the services of all the scientists of CESS for it.

This PRM—which was variously expanded as panchayat/people's/participatory resource mapping—prepared resource atlases of twenty-five panchayats, with the participation of the people, and later became a major change agent in Kerala's economy and politics. The PRM was followed up by its use in one panchayat, Kalliasseri. A comprehensive development report was made for this panchayat based on the resource atlas and later a socio-economic survey. Using that as a starting point, an action research project, known as Panchayat-Level Development Planning (PLDP) was taken up under the Kerala Research Programme of the Centre for Development Studies. Thomas Isaac was to be the de-facto director of this project, though de jure it fell on my shoulders. By the time we started work on the project, election to the Kerala assembly took place and a Left Democratic Front Ministry came into existence. Isaac became a member of the government's newly constituted planning board. So did Dr Ekbal, former president of the KSSP, and Aniyam.

People's Plan Campaign

Isaac came up with a grand idea of making the Ninth Five-Year Plan a people's plan. The government would set aside about 40 per cent of the plan budget for this. The departments would not make any plan for local self-government institutions, and we would make our panchayats real local self-government institutions, which meant that people would decide and plan what they wanted. The Kerala Panchayat and Municipal Acts were to be redone. Isaac and Aniyam discussed this idea with EMS, who quickly agreed to it, as this was something close to his heart. Not only that, he also steered the idea

in the secretariat and the state committee of his party, and then he placed the project before the public. Nobody could oppose decentralization and democratization, and the PPC was launched on 17th August 1996.

A committee on decentralization was appointed with Dr Satyabrata Sen, former economic adviser to the government of West Bengal, as the chairperson. I too was a member of the committee. I had met Dr Sen at the 1978 Party Congress in Jalandhar and then at a meeting organized by the Paschim Banga Vignan Manch (PBVM) in Calcutta. Later, he was invited to Kerala to participate in a three-day seminar on decentralized planning, organized by the CDS. That seminar was a serious one, where E.K. Nayanar, EMS Namboodiripad and many leaders of the CPI(M) and the CPI were present the whole time. When Dr Sen came to Trivandrum in 1987 to advise the government on district councils, I met him again and quickly found a common wavelength.

Within three weeks, the Sen committee gave its preliminary recommendations, enunciating the basic principles on which democratic decentralization had to take place. When you look at, it was an odd idea for a party whose organizational principle was democratic centralization to be crusading for democratic decentralization in economic planning. Perhaps if the USSR had resorted to democratic decentralization in administration and economy, history might have taken a completely different turn.

I remained deeply involved in the Sen committee and in the PPC for the next year and a half, up to the end of 1998. I had to become not only *de jure* but also *de-facto* director of the PLDP project as Isaac could spare very little time for it.

The 73rd and 74th amendments to the constitution had given a large number of responsibilities to the panchayats, but

no powers and resources. The Panchayat Development Societies (PDS) was formed with the participation of all citizens, and because it was a non-governmental body, it could raise funds from funding agencies. The Panchayat Level Development Planning (PDLDP) was conceived with these funds in view, which could be used only to implement projects for which they were given. With the advent of the PPC, the panchayats began to get funds directly from the state government with stipulations on how they should be spent. The panchayats no longer wanted another agency with the PDS to search for funds. They did not want any other agency to be involved in the development planning either, which is why they opposed the imposition of technical support groups to help them in planning. In the five PLDP action research panchayats, conflicting forces were at work. But the work done earlier by the KSSP and the IRTC in resource mapping and development planning could not be ignored.

I had to play two roles—one as state faculty in the PPC and the other as director of the PLDP. Economic planning was not my cup of tea, but since I was forced into it, I had to learn. The PLDP project was conceived for ‘dry conditions’, that is, for panchayats that had no funds. Suddenly, the panchayats had too much of funds in their hands. They found it hard to visualize development activities and carry them out using the resources at hand. The line departments had an established set-up to spend resources. The PLDP teams became almost a faculty for training PPC volunteers. The project had to fall in line with the total state plan. Conceived as an action research programme, it could not now act freely. The research element was lost. We did not succeed to the extent we had hoped. However, to the outside world, the monograph ‘Empowering the People’ based on our work in these panchayats

published by Daanish Publishers was popular and reprinted several times.

As president of the BGVS, I often visited Delhi and other states. I was also spending more and more time with the IRTC. Only in 2008, I could hand over the mantle to Krishna Kumar. I was not happy the way the PPC was progressing. There were several basic mistakes. The concept of 'implementation committee' consisting of beneficiaries, though intended to guarantee good and sincere work, freed paid government servants from their responsibilities. Not only that, having been entrusted with the power to check, measure and approve payments, they became masters of the people instead of their servants. Relying on a centralized monitoring system at the planning board level, instead of constituting statutory people's monitoring committees at the panchayat level, was bound to fail. The necessity of empowering the people with knowledge, skills and authority was not understood well. We wrote to the vice-chairperson of the Kerala State Planning Board, Dr I.S. Gulati, that a strategy change was required and we needed to plan a very massive programme for citizens' education for democracy and project the principle that people are sovereign. However, his colleagues thought otherwise and the programme was not taken up.

There was one more deficiency in the PPC. I too became aware of it only years later. People's planning had to be directed towards development and not distribution of doles. So, we insisted that a certain percentage of the plan funds be invested in the production sector. But this was too meagre an amount when compared to the investible surpluses created in every panchayat or town, which were about twenty times more. At no stage did the PPC think seriously of incorporating the relatively huge savings with the people into the development agenda. The subconscious feeling was that 'capital' had to come from outside

and so Kerala had to be made 'investment friendly'. The United Democratic Front (UDF) governments came up with proposals like global investors meet and emerging Kerala. The Left did not have any alternative. They knew that the old slogans no longer excited the people and there were no new slogans. There was clearly an ideological vacuum. Marxism as understood and proclaimed by the communist and workers' parties, world over and in India, seemed to be hollow and defective.

Ideas on Development

Environment for Development

By 1982, the two major environmental campaigns the KSSP was involved in—protection of the Silent Valley forests and saving the Chaliyar river—came to some sort of a temporary settlement. While the Silent Valley forests were declared a national biosphere and the hydroelectric project was abandoned, the Mavoor factory was closed down for the installation of waste treatment equipment. However, these two controversies brought the issue of development starkly to the forefront. The CITU and a section of the CPI(M) placed two options before the people: either you protect the environment and say goodbye to development or go ahead with development and be ready to sacrifice the environment. According to them, development and environment protection were mutually exclusive and ecology was an imperialist science invented to prevent the development of third world countries.

The KSSP argued that it was wrong to pit the environment against development, and actually, one should be talking about the environment *for* development. The KSSP had to elaborate its concept of development, with special reference to Kerala. During the twenty-second annual conference of the KSSP held in Calicut, a seminar on the development of Kerala, particularly with reference to the primary sector, was organized. A substantive souvenir book carrying the papers of the seminar

was also published. The twenty-third annual conference held at Ernakulam in March 1986 looked into the question of modern industries in Kerala. That conference took the momentous decision to make Kerala fully literate within five years. As mentioned earlier, an ambitious plan was drawn up for it on the lines of Operation Literacy.

At that time, there was no NLM. This planning exercise, however, helped to plan the Ernakulam TLC three years later. And interestingly, Kerala was declared fully literate in April 1991, just a month after the deadline set by the KSSP in 1986. The 1987 annual conference at Quilon dealt with traditional industries. In 1988, the KSSP published a fairly detailed monograph on 'The Eighth Five Year Plan: An Introduction to Critical Discussion'. It was an expanded version of the *Wealth of Kerala*, published in 1976. Later in 1996–97, an attempt was made to publish a similar monograph on the ninth plan, but under the exigencies of the People's Plan Campaign, it did not get priority and was abandoned. Subsequent efforts too did not bring results, partly because of a lack of consensus on development within the leadership of the KSSP. There was ambivalence on several issues of energy requirement, the categories of need and greed, and so on.

There were other issues too. In 1973, when the KSSP coined the slogan 'science for social revolution', by and large there was a shared, though not verbally expressed, understanding of what this 'social revolution' meant. It was something akin to the socialist revolution that had taken place in Russia and China, though not its exact copy. With the collapse of the Soviet Union and the Eastern European socialism, faith in that kind of a social revolution was shaken. Earlier there was also some kind of clarity on who the main players in the revolution were, and on the fact that the role of the PSM was limited to arming them with the weapon of knowledge. Today, that clarity too is

lost. Attempts to redefine the meaning of the slogan or to raise different slogans have not met with any success. The KSSP has been struggling with this problem for more than a decade.

The Bhopal gas tragedy in 1984 was the worst-ever industrial disaster in the history of India. When one looks at the unfolding of the events related to it, one is appalled by the persistent negligence of the management merely to save money, and one is forced to call it a massacre rather than a tragedy. Thousands died and lakhs contracted lifelong illnesses because of a gas leak from the factory owned by Union Carbide in Bhopal. As a symbol of protest, the KSSP activists decided to boycott Eveready batteries, which were a product of the factory. It is interesting and disconcerting to note that the West Bengal contingent of the PSM, the Paschim Banga Vigyan Manch, refused to take such a stand on the pretext that it would be against the interests of workers in the Eveready factory in Calcutta. The KSSP, however, valued the lives of the people above the interests of the management and even the limited interests of a few workers. The vigorous boycott campaign carried out by the KSSP attracted the imagination of even children who for a long time to come never allowed their parents to bring home Eveready products.

Bharat Jan Vigyan Jatha

The KSSP took out an All-India Kala Jatha in memory of the victims of the massacre and against the Union Carbide. That was the first all-India *jatha*. There were participants from Kerala, Tamil Nadu, Karnataka, Andhra Pradesh and Madhya Pradesh. The success of that *jatha* prompted some of us to think of bigger plans. During 1985–86, I had opportunity to travel to most of the states in India to participate in different

seminars or en route to other places. I consciously made use of the opportunity to identify and discuss with existing and/or potential PSM activists about the possibility of organizing a grand people's science *jatha* at the national level.

The National Council for Science and Technology Communication (NCSTC), a wing of the DST was, at that time, headed by Dr Narender K. Sehgal, who was from a later batch of the BARC Training School. He nicknamed me 'The Roving Science Ambassador'. He became quite excited about the *jatha* when I discussed it with him. Science popularization was the mandate of the NCSTC, of which I too was a member.

Thus, in the beginning of 1987, a project proposal was submitted by the Delhi Science Forum (DSF) to NCSTC, on behalf of the various PSM organizations, for financial support to the *jatha*. The proposal was accepted and a national organizing committee was set up to conduct it. This was the first nationally coordinated PSM event. D. Raghunandan of the DSF was the organizing secretary, Dr B.M. Udgaonkar was the chairperson and I was the general secretary. The KSSP provided the leadership for the *jatha*, which was called Bharat Jan Vigyan Jatha. A one-month national camp was organized at the youth hostel in Trivandrum with KK as the camp director. Script writing, translation and production—all of it was done simultaneously. Several earlier productions of the KSSP were translated and transcreated into other languages. Of particular appeal was the title song 'In Praise of Learning' from the drama *The Mother*. Since then, it has been sung and performed a hundred thousand times in all major Indian languages. If Brecht were alive today, he would have been more than thrilled, as it was a song from his play that became the title song of a literacy revolution. Some of the other popular items were *Thumb of Ekalavya* (on human history), *One Question* (on labour) and *Hiroshima* (on peace).

The *jatha* received huge media publicity. Five teams started from five different regions of India: Chennai in the south, Sholapur, the birthplace of Dr Kotnis in the west, Jammu in the north, Malda in the east and Guwahati in the north-east. All the teams converged in Bhopal on 6th and 7th November. The *jatha* was flagged off on 2nd October on Mahatma Gandhi's birth anniversary.

The KSSP participated in the entire programme in a fitting manner. Apart from hosting the national camp, it provided experienced managers to every *jatha* as well as a few artistes. In the final convergence at Bhopal, the KSSP participated in a grand way by chartering a special train of science activists to go from Trivandrum to Bhopal, collecting activists from Tamil Nadu and Andhra en route. It was a memorable event. The bureaucratic intricacies involved in chartering the train were of course nerve-racking. The divisional manager of Southern Railway in Trivandrum had warned me right in the beginning that we would regret getting involved with Indian Railways, that its bureaucracy would ultimately lead to a lot of headache. He was right. They overcharged us to the tune of Rs 80,000, which wasn't refunded even after repeated requests from K.R. Narayanan, who was the minister for science and technology with the government of India.

Talking about K.R. Narayanan reminds me of an interesting episode. While we were in the process of preparing the project proposal for the *jatha*, D. Raghunandan and I went to meet Narayanan to get his support. When Narayanan was the vice-chancellor of the Jawaharlal Nehru University (JNU), Raghu was the chairperson of the students' union. They were now meeting each other after a very long time. After the usual pleasantries and talking about the *jatha* project, Raghu and Narayanan began reminiscing about their JNU days. While saying goodbye, I asked Narayanan, 'Wasn't this a pleasant

reunion?’ Narayanan quipped, ‘Yes, very pleasant. Raghu isn’t bullying me anymore.’ K.R. Narayanan had been always a good friend of the KSSP and a personal friend of mine. Several of my friends have had the misfortune of being elevated to posts, which, according to me, they should not have accepted. Both K.R. Narayanan and Abdul Kalam were presidents of the Indian Union, while Krishna Kant was the vice-president. They were players earlier, but once elected, they became the ball.

Coming back to the BJVJ, Chief Minister E.K. Nayanar flagged off the ‘science train’ on 4th November from Trivandrum. I was the captain of the team, and Srinivasan and Chidambaram, both activists from the Life Insurance Corporation, acted as associate guards. There were in all 750 activists, and each had their own anecdotes to tell. True to its nature, Indian Railways got us to Bhopal about ten hours late and back to Trivandrum twenty-four hours late! I had been moving from compartment to compartment talking to the KSSP activists about the ideology of the KSSP, its history, its responsibilities, etc. It was virtually a school on wheels for them. The culmination *jatha* in Bhopal was led by these KSSP activists, all dressed in white khadi symbolizing the freedom struggle. The excitement at the concluding meeting was so high that it was bordering on a frenzy. Many colleagues carried me around on their shoulders through the crowd.

There was an edit page article in the *Malayala Manorama* daily on 6th November about me. The journalist had gone to my house to talk to my wife and get some photographs. She did not give the journalist much information, but talked a lot about her emotions. She gave them an old photograph of mine in which I was wearing a collarless banian-type shirt. They converted it into a sketch that looked like a sketch of Rahul Sankrityayan, whom I admired a lot. The article was titled ‘Lalithyathinte Parameswaran’ (Parameswaran: The Symbol of

Simplicity) and was quite an honest write-up. Unfortunately I have lost my copy of the article.

The success of the *jatha* did not go unnoticed. Anil Bordia, education secretary, and Sam Pitroda, special advisor to Prime Minister Rajiv Gandhi, came up with programmes that changed the course and pace of my life within a year. The BJVJ was soon followed by two more national events. The first of these was the All-India Children's Science Festival organized by the KSSP at Thrissur. It was a six-day camp of about 1,100 children in the age group of nine to thirteen years, who came from several different places. There were 350 children from various districts in Kerala and another 350 from outside the state. A contingent of 350 children from Thrissur town and the suburbs played hosts to one child from Kerala and one child from outside the state. The guest children lived with their hosts in their homes.

This guest–host mode of living for six days had electrifying results. On the day of the departure, every one of the guests, hosts and their parents wept. It was virtually a river of tears! The KSSP learned this mode of organizing children's camps from Abdul Bhai of the Antar Bharati Group, which later became popular all over India by the name Joy of Learning (JoL). Thousands of camps were held at the local, district, state and national levels. A special mention must be made of the national camp held in December 1994 at Delhi, in which more than 1,000 children from different states participated, and of the Sargotsav organized by the KSSP in Alleppey in May 2004, in which more than 3,000 children took part.

In February 1988, as part of the silver jubilee celebrations of the KSSP, the first All-India People's Science Congress was held in Kannur. The organizing committee of the BJVJ was formally converted into the AIPSN, with Professor Udgaonkar as its first chairperson and me as the general secretary. Raghunandan

continued as organizing secretary, an arrangement that was subsequently dispensed with. The first major activity taken up by the newly formed AIPSN was a nation-wide lecture campaign called the 'Universe Around Us'. The materials for the campaign, script and slides were prepared at a five-day camp at the National Geophysical Research Institute at Hyderabad, whose director Dr Vinod Gaur had been an active sympathizer of the PSM.

A Strange Phone Call

I was still living in Trivandrum with my family when in March 1988, I got a strange telephone call from the general manager of telephones in the P&T department in Trivandrum. He said that Mr Sam Pitroda, who was coming to Trivandrum the day after, wanted to meet me in the evening. I didn't know Pitroda and had only heard that he had come from the US as a technology advisor to Rajiv Gandhi. I had no clue why he wanted to meet me and was naturally suspicious. I was almost certain that he could do no good to the impoverished millions of India, and the PSM was partisan towards them. This assessment was pleasantly altered in the next few months. I met Pitroda at Luciya Hotel at the appointed hour. He was directing the telecom mission at that time and was accompanied by his special assistant Jairam Ramesh (now a well-known Congress leader). In his meeting with me he wanted to know how the KSSP could help the NLM, which was going to be set up soon, especially in the fairly illiterate areas of northern Andhra and Orissa. I told him that, in principle, the KSSP would be only too glad to help with this initiative. He suggested that we meet in Delhi when I happened to be there next to discuss this further. I went to Delhi three weeks later, where we had a fairly

long discussion, during the course of which the scope of PSM's involvement in the mission got broadened.

Towards the end of the meeting Sam exclaimed, 'Parameswaran, let us pledge that we will make India fully literate!'

With the experience of NAEP behind me, I replied. 'The "will" has to be a noun and not a verb. We require the political "will" to achieve it.'

'The government has the will, the prime minister has the will,' Sam replied.

'The people have no faith in it. Let them demonstrate that will,' I remarked. 'Let the PM call a special meeting of chief ministers and all political leaders and with their concurrence make an announcement that all educational institutions above elementary level, that is, secondary and higher secondary schools, including central schools, public schools like the Doon School and Lovedale School, all universities and professional institutions like the IITs and the AIIMS, and all higher and technical institutions will be given a one-year holiday. Let all the students and teachers get involved in literacy classes. Let the nation celebrate a one-year long literacy festival.'

I knew this was not going to happen. Anyway, as suggested by Sam, I met Laxmidhar Mishra and Anil Sinha, who were in charge of the literacy programme, later in the day and promised help.

Education secretary Anil Bordia, whom I knew since 1978 and who had directed Sam Pitroda to us, gave me a copy of the draft mission document and said that they would change whatever the KSSP were not happy with in it. The document was called the 'Technology Mission for Eradication of Illiteracy', similar to the title of other missions, which sounded jarring to us. We believed that literacy was not a question of technology, but had to be a societal mission. Other than that, it was an

excellently drafted document. The mission was later renamed as the National Literacy Mission and was formally launched in May 1988. I was inducted both into the NLM council and its executive committee. The first council meeting was held in June, with Anil Bordia and Sam Pitroda on the dais along with education minister Shiv Shankar. Dr Anita Dighe, one of the council members, stood and suggested that the KSSP come up with an exciting programme, which was immediately supported from the dais. I stood up and spontaneously suggested that like the BJVJ, which had five *jathas* travelling in buses, why don't we think of a nation-wide train *jatha*, consisting of four literacy and science trains traversing the entire country for a period of three months. Sam Pitroda immediately responded that it would be the government's responsibility to provide the train and other resources and asked me to prepare a detailed proposal.

The ball was back in our court. Initially, we had thought of four trains: two north–south *jathas* and two east–west *jathas*, one each on broad-gauge and meter-gauge routes. They were given exciting names like Gandhi, Tagore, Bhagat Singh and Subrahmanya Bharathi. However, it soon became clear that the trains, though exciting media-wise, would have a small village-wise reach. It was Dr Sunder Raman who helped me draw up a reasonable project proposal. The target was to organize 400 district-level *jathas*, where each *jatha* would tour in the districts for thirty-seven days and would reach 100 major villages attracting people from neighbouring villages.

The AIPSN met in Pondicherry to discuss the pros and cons. The dimensions of the programme were so frightening that many shied away from the project. Some members raised fundamental questions about literacy, for example, what control did the PSM have over the textbooks that would be used? What was the guarantee that the fundamentalists and the imperialists would not use literacy to further their interests? Most of them

were agreeable only to a much smaller exercise and that too limited to the south and Bengal. This was ridiculous because the necessity of a literacy campaign was more in the north. I travelled to many states to help build confidence. Comrade B.T. Ranadive gave me decisive support. He said, 'Parameswaran, if Kerala and Bengal are ready, go ahead with them. Include as much north as you can. Don't bother about the content of literacy. Imparting literacy itself is a revolutionary act.'

In many states there was no state-level organization, and so, the final project proposal had provisions for the appointment of a full-time literacy ambassador for two districts, who would set up proto-organizations in those states. The project was approved in March 1989. When I was explaining the detailed structure of the project before a high-level committee consisting of Sam Pitroda, Anil Bordia, Jairam Ramesh, Laxmidhar Mishra, Anil Sinha, Anita Kaul and others, Sam remarked, 'You seem to be developing a parallel NLM!'

I replied, 'Yes, this is the informal NLM, complementary to the official NLM and helping it reach villages where it cannot reach by itself.'

* * *

In September 1988, I attended the state conference of the CPI(M) held at Alleppey. The CPI(M) conference food was always a treat. I had been to the Jalandhar congress, where we were fed all possible preparations of chicken and paneer. I saw my friends from Kerala, not familiar with paneer, picking it out and keeping it aside. In Calcutta, we were fed sumptuous Bengali fish preparations and sweets, though I'm not a big fan of eastern food. Next it was the Vijayawada congress, where the food was completely to my liking, but I could not enjoy it because I had a physical condition that prevented me from having hot food, and what was Andhra food without *awakkai*,

gongura and gunpowder? I saw Sundarayya moving from table to table instructing the volunteers to serve one thing to one delegate, another to the other. He was giving individual attention to each person. At the Alleppey state conference, the hostess was Gouriamma. When she saw me, she called out, 'Give this Namboodiri more of the *chemmeen chammanthi* (prawn pickles)'. She served me and saw to it that I was fed and overfed.

In the middle of all this fun, I got some terrible news. My wife called and left a message at the reception that my son Arun had met with an accident in Bangalore. When I called her back, she told me that our friend and relative in Bangalore, C.N. Narayanan (CN) had phoned her to tell her that Arun had been in a motorbike accident and was admitted in Shivaji Hospital. There were no head injuries, but he had broken his chin and knees. From Alleppey, there was no way to reach Bangalore the same day. So, I rang up the KSSP office in Trivandrum and asked them to book two air tickets for the first flight out to Bangalore the next day. I organized some cash from the bookstall and friends and reached Trivandrum the same evening. We reached the hospital in Bangalore by eleven o'clock. Luckily Arun's injuries were not fatal, though they were also not insignificant. We shifted him to a better hospital and stayed in Bangalore for the next two months.

When Arun contracted chickenpox, we took him back to Trivandrum, but not before he had infected CN's family. My wife and I caught the infection. We passed through some really bad times, but by the beginning of next year everything was back to normal. Arun joined the ABB Company in Bangalore in 1986. And Vipin, who was studying for his final examination while Arun was recuperating, later joined the IISc for M.Sc. Engineering by research. Since both my sons were in Bangalore and I was mostly in Delhi, my wife moved to Bangalore to

set up a home for Arun and his colleagues. In August 1990, Vipin went with his professor's friend to pursue a PhD at the University of South Carolina. A few months later Arun, who was married by then, left for Oregon.

Though I told both my sons that I would be only too happy if they themselves identified their partners, they didn't. I had to look for their brides. Both had arranged marriages. But in my larger family, there are nephews and nieces from various communities and religions - Christians, Muslims, Nayars, Ezhavas, Kshatriyas, Warriors and what not. Tracing relatives has been one of my hobbies.

Ernakulam Total Literacy Campaign

K.K. Krishnakumar asked K.R. Rajan, who was the collector of Ernakulam district if he would like to prepare a project proposal to make Ernakulam district totally literate. Rajan was an activist of the KSSP even before he was selected for the Indian Administrative Services (IAS) and in 1973, he was the personal secretary of Kerala's electricity minister, M.N. Govindan Nair, as well as the vice-president of the KSSP. KK asked him to discuss this idea with me. When he came to Trivandrum to meet me, we discussed a strategy of action. Without the KSSP and with only the assistance of the bureaucracy, he would not have been able to do anything. The KSSP on its own would not have been able to do it either. Therefore, a symbiosis was planned. The NLM could not give any direct assistance to the collector, so the KSSP had to submit the project and bear responsibility for it.

The KSSP executive committee was not in favour of taking up the responsibility. They also had ideological problems and wondered if this was our role. Many members argued that

this would turn the KSSP into a GONGO (Government NGO) or a DENGGO (Developmental NGO). I had to place before them the choice in harsh terms. The NLM and the state administration were placing this challenge and promise of support before us. If the KSSP did not accept the challenge, it stood to lose its moral right to criticize the government on this count. The collector would be forced to register another NGO to route the resources, which did become the norm in other states. The Zilla Saksharata Samitis (ZSSs) were registered, with the district collector as the chairperson.

Ultimately, the KSSP executive committee gave in and thus began the Ernakulam Total Literacy Campaign, which became widely known as the 'Ernakulam Model'. Though the NLM was giving financial support only to the KSSP, we had already decided that it would be carried out by a broad-based set up, including other organizations like Kerala Association for Non-Formal Education and Development (KANFED), bureaucrats like the district collector, block development officers, rural development departments and well-known citizens. When this organization was formed, five people were selected to play key roles: the district collector as the president of the saksharata samiti, Mohandas as the treasurer, Mrs Rose as the district planning officer and two people from the KSSP—Professor P.K. Ravindran and C.G. Santhakumar (CG)—as secretaries. Rajan had full faith in the team. The major responsibility of the organization was taken on by CG. The field workers as well some other people who were unhappy with the confidence shown by Rajan in him called him Super Collector in private. To many others, CG did not stand for a name or a person but for a 'position' like president, secretary or treasurer.

The selection of a government official, Mohandas, as treasurer became a blessing in two ways. He was quite experienced and kept the accounts clean and perfect. Further, it saved

the KSSP from any allegations that could be made by political and personal interests. I, however, made a big mistake. In 1991, when the KSSP was selected for the King Sejong UNESCO Award for literacy, I was asked who I thought should go on behalf of the KSSP to receive the award. I suggested CG and P.K. Ravindran names and did not even think of K.R. Rajan. At that time, we only saw him as a collector and not as an activist, which was not completely fair. If only I had been more conscious of this, a lot of unpleasant events that took place later could've been avoided.

The rich experiences of the Ernakulam campaign require hundreds of pages to record. It would suffice to note here that the campaign disproved the notion that altruism was dead and one would not get volunteers. In the district alone, 23,000 volunteers came forward to teach. Subsequently, nearly two and a half lakh volunteers came from all over the state. During the next ten years, twelve to fifteen million volunteers from all over India came to teach and organize.

The campaign also proved the effectiveness of the sincere collaboration of the bureaucracy with people's organizations, which was reflected not just in the TLC office that was set up as the control room. The lock on its front door was removed the day it was inaugurated and the office was locked only after the declaration of total literacy. This twenty-four-hour culture had its impact on government offices too. The divide between bureaucracy and the people narrowed.

The term Total Literacy Campaign—Sampoorna Saksharatha Yajnam—was coined for the Ernakulam project. The TLC model of people-government Participation (PGP) too evolved at Ernakulam. But for this collaboration, a one-day survey—on 19th April 1989—of nearly six lakh households involving about 50,000 volunteers would not have been possible. The massive environment created literally flooded

almost every household with the news of the campaign on the anvil. The KSSP had to depute about a dozen and a half additional volunteers to take charge of the twenty project areas, into which the campaigns was subdivided. It was really like an environment of revolution that prevailed in the district. It was exciting beyond imagination. The preparation of the primer incorporating the principles of critical pedagogy too was an exciting experience and was the product of several people working together. My own direct involvement was minimal as I was already spending more time in Delhi.

Hectic Years in Delhi

Bharat Gyan Vigyan Jatha

The BGVJ project was informally approved in early 1989. The BGVS was yet to be registered, before which the NLM could not release any money. It was Comrade N.D. Jayaprakash who was doing the boring work of going to the registrar's office to get the draft constitution vetted. A national sponsoring committee (from at least eight states) was required, which was constituted and the request filed, and finally, the society was registered. The BGVS had to be functionally reconstituted and the first general council had to be called. That I would have to take the responsibility as the secretary was clear, but who could we get as the president? The two names that came up were Dr L.C. Jain and Dr Malcolm S. Adiseshiah. Anil Bordia and other friends suggested that Malcolm Adiseshiah would be a better choice, if he agreed. So I went to Madras to meet him. He was, at that time, chairperson of the MIDS (Madras Institute of Development Studies), which was set up by him. He was a well-known educationist and economist and was formerly Director-General of the UNESCO. I had known him, though not intimately, but he knew more about the KSSP and me. I was extremely happy when he agreed to be the founder-president of the BGVS, but it was only after we agreed to the one condition he put before us that the council meetings be held either in Madras, where he usually resided, or in Delhi,

where he visited frequently. He wasn't going to be able to attend any other meetings.

The first meeting of the formally constituted general council of the BGVS was held on 22nd December 1989, with Dr Malcom S. Adiseshiah as the chair. It was held in the Vishwa Yuvak Kendra, New Delhi. I don't remember much from the meeting, except one thing. Anil Sadgopal accused the KSSP of imposing a Kerala model on the north, where it was not applicable. He also said that the literacy programme per se was unwarranted and it diverted attention from the universalization of elementary education. It was this very Anil Sadgopal who led the formation of a Bharat Jan Vigyan Jatha Samiti to compete with the AIPSN and the BGVS. In this, he was functionally supported by Dr Narendra Sehgal of the National Council for Science and Technology Communication (NCSTC).

The NCSTC supported the BJVJ of 1987. Sehgal was very unhappy for being acknowledged only as a facilitator of the *jatha* and not its co-creator. But he wasn't the creator. Later, of course, he created the BJVJ Society. Professor Yash Pal liked Anil Sadgopal and gave him moral support. Anil was partly responsible for the difficulties faced by the BGVS, in the Bharat Jan Gyan Vigyan Jatha of 1993. Anil Sadgopal also opposed the Right to Education Bill, dubbing it as not being radical enough. There was also Dr Dinesh Mohan from IIT-Delhi, who argued during a seminar that we were committing an aggression on the rural illiterates with our campaign for literacy, that we were encroaching upon their freedom to remain illiterate! Such comic characters do exist.

Work had to be started on the BGVJ. I sent an SOS to Professor E.K. Narayanan (EKN) who had just resumed teaching after a short stint with the Ernakulam TLC programme. Formalities of deputation would've taken time, so he took leave and joined me in Delhi. We were a two-person team. For two

months, we stayed with Dinesh Abrol in his Saket apartment, who housed and fed us. Once the first grant instalment from the NLM came in, we took up another apartment in Saket, which became our residence as well as office. An odd-job man called Shankar Yadav was also recruited, who is still with the BGVS, but has upgraded his skills considerably. Now he is a storekeeper, accounts clerk, data entry operator and an outside job assistant. We also recruited a cook, Arun from Tamil Nadu.

What we had promised the NLM was ambitious. As I said earlier, the project included conducting 400 district-level *jathas* traversing through 100 medium villages, each catering to eight surrounding small villages, over a period of forty-four days, from 2nd October to 14th November 1990. The choice of this structure was based on the NBMS model. How could the *jatha* visit all the medium villages in a district? About twenty state committees already existed, most in the form of the state organization committee of the 1987 BJVJ. We now had to set up 400 district organizing committees and about 40,000 local organizing committees. We also had to recruit one full-timer for two to three districts, which was done by the state committees. The national centre dealt with the twenty plus state committees and more than a 100 literacy ambassadors directly, which was done to ensure that the formation of committees and preparation for the *jatha* was taking place.

It was impossible to monitor local organizing committees, given their number, but we tried to monitor the district-level organizational work through the literacy ambassadors, who reported to both the state and the centre. Only one organization, the PBVM, refused to let the ambassadors in their state report to the centre because they never wanted to be a part of any centre. Getting the accounts of expenditure from them afterwards was a Herculean task. I even had to meet Comrade Biman Basu and request him to intervene. Looking back, I can

see that PSM activists from West Bengal seldom thought of India as a whole, at least I never felt it. Over a quarter century of the PSM, the PBVM neither inspired nor led any national-level activity. They never even spared any full-time activists for national-level work.

Coming back to 1990, the Saket apartment was our home and office. EKN and I were almost on the same wavelength. He too was a man of details. We would get up early in the morning and hit the worktable. Both of us preferred the Kerala mode of dressing of not wearing any shirt at home. Often, literacy ambassadors and activists would come to see us and we would be working bare-chested. This was considered improper by the northerners. So gradually, we had to change our habits.

None of the states had any previous experience of organizing such *jathas*. So we had to send detailed instructions to *jatha* members, including food, size of stage, light and sound, etc. Later, after the *jatha*, a team under Dr Anitha Dighe evaluated the BGVJ on behalf of the NLM and were most impressed by the meticulousness of the instructions sent out, mostly by EKN, to the states and districts. When I try to recollect those few months in New Delhi, my head spins. I can't imagine how we managed to get through them.

When EKN came to Delhi, he could not speak even a few sentences in Hindi. Later, he became a good orator in Hindi. But, of course, that was nothing compared to KK's Hindi, who later became the secretary of the BGVS and led it for more than a decade and a half. By the time the preparation for the BGVJ was halfway through, it became clear that the BGVS could not be wound up after the *jatha*. Taking inspiration from the Ernakulam experience and following K.R. Rajan, several others—for example, Mathew from Pondicherry, Madan Gopal from Dakshin Kannada, Ratnaprabha from Bijapur and Manavendra Nath Roy from Midnapur—initiated measures

to take up total literacy campaigns in their own districts. Only in West Bengal, there was a field organization to assist them, called the Paschim Banga Saksharata Prachar Samiti, under the chairpersonship of Jyoti Basu. The BGVS had to set up district- and state-level organizations not only to conduct the *jatha* but also to run literacy campaigns. The BGVS struck roots and could not be uprooted. It remained an integral part of the NLM for many years.

The BGVS was a success. More than 360 districts organized the *jatha* and about 40,000 villages were covered. It was one of the most massive churning processes that took place in post-independence India. During this time, another widespread counter-churning operation took place, which was the agitation of caste Hindus against the Mandal Commission report on reservations for the Scheduled Castes and Tribes. In a large part of the country, especially in the north, normal life collapsed for a few weeks. However, strangely enough, the BGVS managed to carry on its organizational work. In districts where it was more active, caste conflicts were much less.

By the end of the *jatha* in November 1990, several more district collectors, some encouraged by district and state BGVS activists and some on their own, had begun preparations for TLCs in their districts. To receive the NLM funds, they had to have a counterpart to the KSSP. Therefore, broad-based district literacy committees, the ZSSs, were set up with the district collector as the chairperson and a BGVS activist as the secretary. Some of these samitis were named Bharat Gyan Vigyan Samiti, but later, at the request of the national BGVS, all of them changed their name to ZSS. They required help even to prepare project proposals.

The NLM considered BGVS as its integral, but informal, part and its secretary was placed on par with the director-general of the NLM, which was visible in the various protocols they

followed. Education secretary Anil Bordia was the chairperson of the executive committee of the NLM council, and during the meetings of the committee, the director-general of the NLM sat on his left and the secretary of the BGVS sat on his right. The executive committee meetings were convened only after obtaining concurrence from the BGVS secretary. While touring the districts, the director-general and I would sit in the back seat, which was a way of indicating equal deference. I had often felt embarrassed by such protocols, which also had a negative impact on the lower-level bureaucracy. Internally they developed an animosity towards the BGVS, which bared its teeth once the original team of senior bureaucrats like Anil Bordia, Laxmidhar Mishra and Anita Kaul left the scene.

Laxmidhar Mishra has long retired from but is still associated with the NLM. I met him for the first time just after the meeting with Sam Pitroda in April 1988. He developed tremendous love and respect towards me. Like me, he too was born in a poor Brahmin family in Odisha. He was brought up by relatives, for whom he had no love lost and was happy to get away from them. His family is close to me too and his friendship is one of my most precious assets.

It was becoming clear that for post-*jatha* functioning, we required more people at the national office. I requested several of my friends from the DSF, the PBVM and the Tamil Nadu Science Forum (TNSF) to provide cadre. Under the fellowship scheme offered by the UGC, I could have taken any number of university teachers. If some of whom I had asked to join had accepted, the story of the BGVS would have been different. It would have developed academic capabilities, instead of remaining by and large an activist organization. The only activist-academic we could get was Dr Vinod Raina.

While the preparatory work for the BGJVJ was going on, another development of far greater impact was brewing at the

national level. The Uruguay Round of General Agreement on Trade and Tariffs negotiations was heading towards culmination. The draft terms under the GATT were very much unfavourable to developing countries, and India, together with Brazil, was at the forefront of the resistance. However, the US and Europe were bent upon imposing their neo-liberal agenda on the developing countries, the former's strength increasing with the collapse of the Soviet Union. Mr S.P. Shukla, the commerce secretary and Indian representative to the GATT negotiations, took a strong anti-imperialist position. He was removed and he retired soon after, as Dr Manmohan Singh, the finance minister, and Montek Singh Ahluwalia, the finance secretary, were strong proponents of neo-liberalism. The PSM and the left were engaged in a campaign against the capitulation policy, that is, agreeing to the Dunkel Draft of the GATT. A number of Indian left economists together came out with a statement against the GATT and also indicated alternative policies. I, however, felt that the left's document was too weak. It was anti-imperialist no doubt, but was hazy about what to do and how. It was not a document for an alternative society. I felt that the people would not be enthused about it, and a palpable alternative covering economics, politics and culture would have to be placed before the people to excite them. The programmes of the CPI, the CPI(M) and other left parties and movements were not able to create that confidence. People came forward in a big way for the literacy campaign in Kerala because they developed faith in its leadership and commitment. The NLM's mandate was to engender a massive movement for literacy. But all the previous mass movements for literacy had taken place as part of or as a sequel to major social changes—Cuba, Myanmar, Ethiopia, Vietnam, with Nicaragua as the most recent one. In spite of any such social upheaval, I believed that it should be possible to engender a mass upheaval against

imperialism and for socialism of a kind different from that of the USSR or Europe. There had to be a clear and exciting programme to win the confidence of the people and the Left had to give it to them.

As an initial input, I wanted to set up an activist-academic group that worked with the Left to develop a more comprehensive view of a new society. Keeping this in mind, I called twenty to twenty-five academics and activists for a brainstorming session on 30th June 1990. Not everyone I invited could participate. Among those present were Dr Amresh Bagchi, H.K. Paranjpai, S.P. Shukla, Thomas Isaac, C.P. Chandrasekharan, Venkatesh Athreya, C.P. Narayanan, Probir Purkayastha and Dinesh Abrol. All of them were more concerned with a visible immediate step against the Indian capitulation. I failed to excite them and persuade them to get involved in a longer-term study and action programme. This meeting was perhaps the first one which twelve years later exploded into the Fourth World scandal (not a controversy, because there were no two sides to it, only one side).

We Move to Thrissur

In 1992, my wife and I moved back to my hometown, Thrissur. The children had already gone to the US for higher studies. I was visiting Delhi and other places quite frequently because of which my wife would be left alone at home. I had to request my friends to help her. There was no particular reason for me to stay in the capital city and I was also not into power politics. So, we sold our house in Trivandrum against the advice of friends and moved to Thrissur. There, we built a new house in our ancestral compound and lived in the top floor of a friend's house nearby while it was being constructed. My two younger

brothers and mother lived in the ancestral home, a mere 20 metres away.

In December 1992, when I was away in Alleppey for a meeting of the KSSP, I received a phone call that my mother was seriously ill and in a coma. She had contracted chickenpox, which had led to encephalitis. I returned immediately and we got her admitted into the Thrissur Medical College Hospital. But nothing much could be done and she passed away on the 30th. I did not cry. Twenty years earlier, in 1972, when my father died, I did not cry then either. I just felt a vacuum. Later, in 1995, my younger brother Narayanan, who was an engineer with the Maharashtra State Electricity Board, died from a cardiac arrest while we were in the US with my son. My nephew Jayakrishnan died very young in a car accident. I did not cry during those times either. But there have been hundreds of occasions when tears have rolled down my cheeks while watching films or even due to a real life event, but seldom on the occasion of a death.

Death is a fact and facts are to be accepted, not to be lamented upon. Neither my father nor mother suffered for too long. Our family has been lucky enough to escape long periods of suffering. My father's younger brothers and four of my cousins died from cardiac arrests too. One could say that we are fortunate that we have genetic predisposition towards heart-related ailments, as I have seen many cases of prolonged, incurable illnesses, where life is extended only through instruments and medicines, making it a hell both for patients and their relatives. So in my will, I have written this very clearly: 'Please do not extend my suffering by putting me on all sorts of devices and medication. Please reduce my suffering, and let me go.'

I was never a religious man and, like I said earlier, I never felt any need for the god hypothesis. However, I performed all

the usual rites upon my father's death because I did not want to hurt my mother's feelings. On her death, I did not perform any religious rites. My mother knew this and was not bothered about it. I don't want any rites to be performed on my death either. My will states:

It is willed that neither the members of my family nor my friends or relatives shall do any religious or caste rites or ceremonies in connection with the disposal of my body. I don't want my body, after death, to be used in any manner whatsoever to reinforce the 'God Illusion'.

BGVS Continued

By the end of 1990, we had become immersed nose-deep in field activities. EKN had to go out to more and more districts. Our Haryana team with Dr Dahiya and others had become one of the strongest. Mr Khuller was the district collector of Panipat, who initiated a TLC. It was in a public meeting there that EKN made his maiden speech in Hindi. He christened the literacy campaign the 'fourth battle of Panipat'. (In Indian history, three crucial battles were fought in Panipat.) We wanted more people from the states. Dr Sunder Raman from Pondicherry had been a part of the PSM since 1983. He and Sudha, the All India Democratic Women's Association (AIDWA) leader, had since long been good friends of mine. Their son was the one who called me Taata (grandfather) for the first time. Till then, to relatives of all age groups, I was Unniyettan (elder brother). Even children used to call me that. Seldom did they call me uncle.

Sunder Raman is a good doctor and an equally good planner. He helped me prepare the detailed project proposal for

BGVJ and I had my eye on him. I knew that it would be of great help if he could join the BGVS for a few years on deputation. EKN had to go back, but I was not sure whether Sunder would be in a position to leave Pondicherry. First, I talked to Sudha. I always made it a point to consult and take permission from family members before pulling out anyone from full-time work. For instance, in the case of T. Gangadharan, before I inducted him to the Orissa super cyclone rehabilitation programme, I went to his house, stayed there for a night and got his wife and daughter's permission. However, I could not do the same with my family. My decision was a more drastic one, for which no wife would have given permission. So I imposed my decision on the family. The other option would have been to continue living in Bombay as an 'armchair revolutionary' or become an active reactionary and thus destroy myself. When I asked Sudha's permission, she was quite happy to give it and said that it would be good for Sunder to get out of Pondicherry for some time. That's how Sunder became the treasurer of the BGVS.

Those years were of genuine cooperation and collaboration between the bureaucracy and the people's organization. The initial three to four years can be said to be the golden years of the NLM and the BGVS. As time went by, Anil Bordia was superannuated, while Laxmidhar Mishra and Anita Kaul finished their five-year term in Delhi. Which meant that the NLM had an entirely new bureaucratic team. Unfortunately, their relationship with the BGVS was not organic. The district collectors noticed this too. Gradually, the campaign became bureaucratized and the bureaucracy began to view the BGVS with suspicion, because of which the activists of the BGVS lost their motivation to remain involved in the literacy campaign.

In 1993, the BGVS organized an all-India women's *jatha*. It was christened the Samatha Jatha to denote the central slogan of equality between men and women. Inaugurated in

five different corners of India, the five *jathas* came together at Jhansi with the symbolic message of freeing women from the prison that society had built around them. It also proved to be a very inspiring one and gave birth to the Samatha movement.

The Hamara Desh Jatha of 1994, which was organized as a number of relay *jathas* culminated in Hyderabad. *Kala jathas*—national, state and regional—had become an essential component of all environment-creation programmes, but the Hamara Desh Jatha was different. It was a citizen education programme catering to the intellect more than emotions and its focus was on development and participatory democracy.

By 1994–95 the BGVS began to diversify its activities. Resource mapping, drainage mapping and preparation of watershed development plans were some of them. By 1992–93 I had shifted back to Kerala. KK became the treasurer and later took up the secretaryship. Overall, he held the fort for about ten years and is now the chairperson of the BGVS.

Dr Narayana Menon too joined the BGVS. After an unsuccessful effort to get a permanent position in the NCERT, due to the sudden death of Dr Riaz Ahmed with whom he was working, he was invited by K. Viswanathan, the eminent Gandhian, to head the education division of Mitraniketan run by him. Menon joined Mitraniketan but he was a diehard Marxist and his assessment of Gandhi was not sympathetic. In fact, his assessment of Viswanathan was even harsher as he judged Mitraniketan as a foreign-funded agency and considered Viswanathan a fraud. (It is a well-known fact that a lot of NGOs are funded by the CIA. Since any CIA funding is suspect, all funded NGOs are also considered suspect.) Obviously, the two could not work together for long. Menon left Mitraniketan and joined the journal *Social Scientist* as a functional editor. He remained with the *Social Scientist* till the publication was shifted to Delhi. In the meantime, the Social Scientist Press started a

project to translate EMS's book, *The History of India's Freedom Struggle*, from Malayalam to English. It was a major project and the book was published in 1986. Later, a reprint was published in 1993, which burned a hole in my pocket. From the money I got by selling my house in Trivandrum, I invested Rs 2 lakh on the reprint. The Indian School had closed down by then and the Social Scientist Press too had ceased to exist. I hardly even managed to recover the interest.

By the early nineties, Menon was free and I invited him to join us in Delhi. He worked as a full-timer for the BGVS till he had to return to Kerala after a heart attack. By that time, I had gone back to Kerala too and was immersed in other activities, and KK had taken over the reins of the BGVS.

Menon was a benign presence in the BGVS. I vividly remember one incident when I saw a young lady, Tara, being intensely counselled by Menon. She had recently come out of an unsuccessful marriage and was in depression. Menon managed to get her a short-term project appointment at the NLM and slowly drew her out of her shell. Later, Tara got a job with the UNICEF and married Dr Jayaraman, Sunder Raman's older brother.

On his return, Menon settled down in Alwaye, near his wife's ancestral home. His own ancestral home was near Ponnani and he used to shuttle between the two places. Being impatient, and also a bit stubborn, he could get along neither with the local KSSP unit nor with the party, and was soon virtually out of both. He had ambitious plans to write, but was never satisfied with his own writing. He was an orthodox communist and could not approve of the functioning of the CPI or the CPI(M). I was perhaps the only person with whom he could relate emotionally and intellectually. He used to visit me regularly at Thrissur till his health failed, which is when I started visiting him at his home. He and his wife had already

moved to live with their daughter Jyoti at Alwaye. For three or four years he was quite unwell, often bedridden. His misery ended when he passed away in 2011.

None of the mass organizations or political parties of the left or the right showed any interest in the literacy campaign. They were not opposed to it, but the campaign was not on their agenda. The political leaders—the ministers and others—in the states considered TLC only as an additional source of revenue for the state. The collectors and senior IAS officers who showed an interest in literacy campaigns were not encouraged and were often viewed with suspicion. There were at least a hundred senior IAS officers who were quite radical and brave to take a pro-people stand—like Madan Gopal, Sheela Rani Chunkat, Raju, Nagarjuna, Harsh Mander, Venugopal, Yuganthar, Sudip Banerji and many others—but they could not obviously not do much without the support and encouragement of the ministers. Whatever the NLM could achieve in the initial five or six years was due to the symbiosis of the bureaucracy and the PSM. The gradual decay of the literacy campaign from the mid-nineties onwards can be mainly attributed to the apathy of the Left and often the hostility of the Right.

The BGVS tried to diversify into addressing pro-people plans like drinking water, watershed, elementary education, and also became involved in different people's rights campaign such as right to information, right to work, right to food and right to health. The BGVS had played a significant role in the passing of the National Rural Employment Guarantee Bill and the Right to Education Bill. I was only very marginally involved in these since I had already shifted my focus from literacy to development. In all these developments, Dr Vinod Raina had played a very important behind-the-scenes role.

The heydays of the literacy campaign were over by the mid-nineties. The NLM no longer considered the BGVS as its

informal arm and reduced assistance. We tried to limp forward with the support of the National Drinking Water Mission and Watershed Development Programmes, but by the end of the century, we were in a very bad state and had to start thinking about closing down the national office. The delegates from Kerala to the general council meeting of the BGVS at Dhanbad in 2002 strongly argued in favour of closing down, but the delegates from the northern states were vehemently opposed to it. But nobody knew where to raise money from to keep it going. Dr Sunder Raman, who had previously agreed to be the secretary of the BGVS, refused to do so, which put us in a hopeless situation. The general council members wanted KK to continue, but he had already carried the responsibility for ten years. I was firm that if nobody else volunteers we had no choice but to wind up the BGVS. It was at this juncture that Dr Vinod Raina came forward and took up the mantle of the BGVS. He had good connections and was greatly respected by the academic community. He managed to convince Sir Dorabji Tata Trust to give the BGVS an unusually large grant of Rs 10 crores to be spent in five years.

Under his leadership, a new team also started emerging with Kuldip Tanwar, Asha Mishra and others. Kuldip Tanwar was an officer of the Indian Forest Service, who took voluntary retirement from the position of chief conservator of forest to essentially work full-time for the CPI(M). He took over the job after Vinod and held it for one term. I continued to be the president all this time. In 2008, Asha Mishra became the secretary. She is an extremely dynamic and versatile person and an efficient organizer. I have known her from the days of the BJVJ. She had been a strong presence in the Madhya Pradesh BGVS since Santosh Chaube's departure. She has now been holding the fort at the BGVS for the past five years and continuing the heroic battle. To me she is a niece, a sister and a

mother all rolled into one. Often she chides me like a mother. So does Usha Rani from Orissa and Komal Shrivastava from Jaipur. The BGVS is a wonderful family.

Vinod Raina

I had great respect for Vinod Raina's intellectual acumen. He and his wife Dr Anita Rampal were among my closest friends. Vinod died of cancer on 12th September 2013. All the years that we have worked together, the dreams that we have dreamt together and the despair that we have felt together flash through my mind. The emotions that these memories evoke in me are hard to describe.

I met Vinod for the first time at Panchmarhi, Madhya Pradesh, at a workshop organized by the DST. When C.J. Johny introduced him to me, the first thing I wanted to know was: 'Are you Anita Rampal's husband?'

He said, 'Yes.'

'Then you are invited to Kerala to participate in a national seminar on the New Education Policy.' When he looked at me completely puzzled, I said, 'We are inviting Anita and we want you too.'

My colleagues in the KSSP, Annan (R. Radhakrishnan) and Karivallur Murali had earlier participated in a workshop on science communication organized by the Jamia Millia University in New Delhi. Its vice chancellor, Dr A.J. Kidwai was an admirer of the KSSP. Annan had met Anita at the workshop and was very impressed with her. When Anil Bordia asked the KSSP to organize a national workshop on the NEP, Annan had asked me to invite Anita Rampal as well as her husband Dr Vinod Raina. That is how I ended up extending that invitation to Vinod. He was leading the Hoshangabad Science

Teaching Programme (HSTP) then. Both Anita and Vinod came to the workshop held on 7th to 10th November 1985 in Trivandrum, which is where I met Anita for the first time. Vinod and I met several times after that, at the teachers' training camps organized by Eklavya, the institutional successor of HSTP, and on various other platforms. Like me, Vinod too was a person of diverse interests—education, science, development paradigms, etc. He too was a champion of the poor, the marginalized and the oppressed. However, he was much more an internationalist than me. He was active in several international organizations like the Asian Regional Exchange for New Alternatives (ARENA), Jubilee South, World Social Forum, Alternatives International, etc. He also brought me to ARENA, of which I remained a less active member for a couple of decades. With ARENA, I became richer in my wealth of friends. There were so many of them from South and South East Asia.

It was only in the mid-nineties that Vinod became fully active in the BGVS and rescued it at its most critical moment. He was sharp, intelligent, logical and well read. He had one of the richest libraries that could be accessed by revolutionary intellectuals. He was clearly an intellectual; his revolutionary practice was not in electoral politics. He could not stand 'pretenders'. Within the BGVS and other mass organizations, very few people can be classified as intellectuals. Very few read and study, so most of them could not understand Vinod. Vinod and I understood each other well. I have learned much from him, and perhaps I was the only person in the BGVS/AIPSN group Vinod would open up to.

When it was discovered that he had prostrate cancer, which was in the secondary stage, and he wouldn't survive it, he made a decision to not bow before it and to face it boldly. He did not want others to think of him as a sick person, so he decided to share the news with only a few people. Besides Anita and a few

very close friends, nobody was told about it. Within the BGVS, he only told me. He did not want his 100-year-old mother to know about it, so most members of his family were kept in the dark. He continued all his activities for three more years while simultaneously undergoing treatment. Towards the end though he became visibly sick, and only then, in April 2013, did he share his ailment with his colleagues in the BGVS.

I gave him constant company during his last years without getting emotional, partly because that is my character too. Death is not an emotional factor for me, but the end of all emotions. Life gives one emotions, so Vinod concentrated on life, which meant activity. He lived a rich and full life. When I think of him, in my memory gets surcharged with ‘intellectual emotions,’ if one may coin such a phrase—a respect towards his scholarship and a feeling of affection.

In Search of an Ideology

Fourth World

Personally, I had started my search for an ideology—not only its broad features but also its detailed structure—since my days in Moscow. I felt that the ideology practised in the USSR and other socialist countries was defective and bound to fail. The general features of a new ideology based on certain broad concepts like democracy and development had been taking shape in my mind. I started putting it down in writing in 1974, with the first issue of *Chintha Weekly*. The article in the journal argued for a new science and technology policy. Underneath it was the plea for a new economics and politics, which was a synthesis of the thoughts of Marx and Gandhi. Over the years, I have been writing on this subject, mainly to improve the clarity of my thoughts.

The downfall of the socialism of the twentieth century made this even more urgent. But the world over, radicals were becoming increasingly sceptical about ‘grand narratives’ because the one grand narrative that they had believed in had failed them. So, no more narratives, even short ones—that was the plea initially from the angry youth of the seventies and eighties, and is now shared by many more people. On the contrary, I felt, and feel even more strongly now, that what is required is not a rejection of grand narratives, but their revision and expansion.

The historical tendency of human beings has been to imagine more and more grand narratives. From the disparate tribal narratives emerged the code of the Hammurabi, Hinduism, Confucius, Tao, and later, of Buddhism, Christianity, Islam and so on. None of these could have been the ultimate narrative because there is no such thing as the ultimate narrative. Then we had the grand narratives of Marx, Lenin, Mao, Gandhi and others. What we want now is an even grander narrative based on the experiences of all previous narratives. No messiah will be born to give us such a narrative; neither do we need one. It will only turn into another 'ism', which will include only a few and exclude many. A grander narrative has to evolve through collective thinking and collective action.

I attempted to initiate such a collective thinking process in the June 1990 meeting, but I failed. But I didn't give up. My small book, *New World–New India*, published in 1994, was another attempt in that direction. It did not initiate any dialogue because there was an atmosphere of fear for open dialogues, as those could incur the disapproval of the party. In fact, my senior party comrades admonished me, telling me that it would create confusion amongst the party rank and file. However, it could not stop me from thinking, feeling and acting, and despite everything, isolated discussions and dialogues had been taking place. In 1998, I presented a paper called 'Towards the Concept of a Fourth World' at the People's Science Congress held in Nalanda, Bihar.

In August 1995, I had the chance to visit Canada and the US. I had been invited by Professor Marvin Gettleman, a Marxist trade union teacher and professor of history in Brooklyn Polytechnic University, to present a paper on 'The History of Communist Education in India' at an international conference on history, held in Montreal. He had also offered travel support. I grabbed this opportunity for two reasons:

first, to visit the US, and second, more importantly, to do an in-depth study of early communist education in India.

I had been a party teacher for the past twenty years, mostly teaching Marxist philosophy. There were party schools, but of very short duration, normally from three or four days up to a maximum of ten days, though the latter was quite rare. Some of the things I wanted to know were: How did EMS study Marxism? Who taught him and his friends? What were the books he read? I did two interviews with him, in which he told me about his own learning process. Mostly he was self-taught. The major textbook he and his contemporaries consulted was *A Handbook of Marxism*. He couldn't remember who the authors of this textbook were. I also interviewed contemporary teachers like Comrade M.S. Devadas and several leaders of the CPI like Chathuraanan Mishra, D. Raju, and others. I got the curricula of the forty-day long party schools, the earlier one-year long party courses, and others.

I didn't just limit myself to formal party schooling. I also brought in radical left education in general, in which the KSSP occupied a high position. The main objective of the KSSP was to educate people. It had been active in citizens' education right from the beginning. Subjects included world vision, agriculture, industry, environment, energy, education, health care, housing, transport, gender, culture and many others. The approach was radical and left. There was every reason to consider it as left or communist education, though not party education. From all this, I managed to prepare a fairly long and in-depth paper.

The conference, however, was a disaster. There were hardly a dozen participants in that session. Earlier, I had participated in a UNESCO conference in Paris and then a 'rethinking Marxism' conference in Amherst, Massachusetts. No serious interaction took place at either of these places. In large conferences, usually very little communication takes

place in the formal sessions and there is much more activity in the lobby discussions, but here even the lobby talks were inconsequential. The conference of 'Intellectuals and Artists in Defence of Humanity' held in Caracas, Venezuela in 2008 was slightly different. There I got the opportunity to listen to the oratory of Hugo Chavez for five hours. I got acquainted with Marta Harnecker and Michael Lebovitz, who were close friends and confidantes of Chavez and Fidel Castro, and also met a number of Latin American, African and comrades from other countries. The Latin American experience was an exhilarating one. I translated three Latin American books (one by Marta Harnecker and two by Michael Lebovitz), wrote a political biography of Hugo Chavez after his death and compiled an anthology on the Latin American New Left.

Like I said earlier, I became a member of ARENA, which was located for a long time in Hong Kong, and it was Vinod Raina who introduced the group to me. ARENA is a small group of fellows and activist-academicians from various South East Asian and South Asian countries. The live wire of the group is Lau Kin Chi, a professor of cultural studies in Lingnan University of Hong Kong. As part of this collective, I had the fortune to visit several countries in Asia like China, Japan, the Philippines, South Korea, Malaysia and Sri Lanka. I was also able to add several scholar activists to my treasure house of friends from these countries. All of us were on the lookout for alternatives, ideological and practical. Amongst them were also people who disliked the very concept of an ideology and considered ideologies as inherently violent. They are all very well respected scholars in their countries and, at the same time, not much liked by the state. For example, there is Muto Ichiyo and Kinhide Mushakhoji from Japan, Wen Tejun from China, Joel Rokomoro from the Philippines, Suhi from Thailand and Vinod Raina. When Muto Ichiyo first visited India in, I think,

1994, Vinod took me to meet him. ‘He is a congenital dreamer, just like you’, Vinod said. It didn’t take us very long to connect. Later, I was invited to be a fellow at the ARENA, which I gladly accepted.

The deepest and the longest association that I had within ARENA was with the dynamic long-time coordinator of the collective, Lau Kin Chi and her partner Raymond. She helped me visit China for a second and third time as a guest of the Beijing University. My first visit to China was with Arjun Singh, the minister for human resource development, government of India, as a member of a governmental delegation on education. There I was able to go into villages and village markets to gain first-hand experience of rural people’s lives and concerns. The impression I got about China’s market socialism was rather mixed. Shanghai, Canton, Beijing all are cancerously growing cities, quite antithetic to what was envisioned in the Communist Manifesto. KK (who had accompanied me) and I spent three days in a village, about 200 kilometres away from Beijing, to plan the conversion of an old school set up by James Yen into a centre for rural technology and development, modelled on the IRTC. The village did not have any sanitary toilet and there was no running water. It was a pretty poor village. It had a tailoring shop with a few bolts of cloth, where I got trousers stitched as a souvenir, for 18 RMB (approx. Rs 150). I still wear those trousers after fifteen years.

Under the leadership of Lau Kin Chi several batches of students from Hong Kong and mainland China visited Kerala to study the PPC and the KSSP. A few did their doctoral work on Kerala. IRTC and ARENA also organized a four-day workshop at the IRTC.

As noted earlier, many ARENA fellows were opposed to grand narratives, a term that brought to their minds the

experience of the Soviet Union. But I was becoming increasingly certain that without a shared narrative outline, ARENA, or for that matter the KSSP, could not be effective in demonstrating coherent alternatives. I tried to organize an e-discussion on this among select ARENA fellows, but I did not succeed, partly because of a language problem, but also because of a lack of conviction in the necessity and possibility of such an effort. Within the KSSP I have been relentlessly fighting to arrive at a shared perspective about the future, and the process is still going on. The world over there are tens of thousands of groups, small and large, based on different platforms and issues, wanting and working for 'another world'. But there is no ideological lens to focus their efforts to undermine capitalism and build new societies. The capitalists have a very powerful lens to converge their efforts, that is, profit and capital accumulation.

ARENA and Lau Kin Chi also gave me a wonderful opportunity to visit Caracas, Venezuela, to participate in the conference I talked about earlier where I listened to the legendary Chavez for five hours. He inspired me to study in more detail the Latin American left movements in general, and the left movement in Venezuela in particular. What was happening in Venezuela was exciting. My first impressions were mixed. I had great admiration for Chavez, but spending five hours on us was too much of a luxury. His time should've been better utilized. We were really not worth it.

The city of Caracas frightened me, as it is a highly metropolitan city with all the ills that such cities carry. It has sucked the villages, which were pretty poor and it is not easy to de-urbanize and rurbanize. But I don't think that even the necessity of resolving the increasing contradiction between cities and the countryside was appreciated by the leadership. The dominant concept of development was the same as earlier:

increasing the gross national product (GNP) with the notion of equity added on. I could not find any literature on a ruralized economy.

Chavez did not have any political organization at the grass-roots level and was elected president because of his charismatic personality. To convert this charisma into a sustainable structure was his first challenge. He began to organize, with the help of his comrades-in-arms, what are called Bolivarian Circles and Communal Councils, quite similar to the neighbourhood groups and village development councils in Kerala. He acknowledged the People's Plan Campaign in Kerala and Participatory Budgeting in Porto Alegre as the sources of this structure. The objective was, mainly, to set up a grass-roots level organization to provide political backing and not as instruments designed to undermine capitalism and promote socialism. He too believed that with state power in hand, he could build a socialist (twenty-first century) Venezuela from above. This attempt is likely to fail if enough grass-roots capabilities are not developed soon.

CPI(M) Expels Me

I continued my efforts to share and refine my ideas. As part of that, I organized two retreats, one in 1998 and the other in 2002. I had invited a limited number of serious-minded people from political parties and movements, including leaders from the CPI and the CPI(M). These retreats did not cause even a ripple in society, but suddenly, out of the blue, a controversy on Fourth World emerged, I became a 'revisionist' and 'a threat to revolution'. This happened in the year 2003. It will perhaps be interesting to follow the media blitz on

M.P. Parameswaran and his Fourth World. It all started with an article by Appukkuttan Vallikkunu, a senior journalist in Kerala, challenging me on Marxist grounds. It was more of a scandal-mongering article than a serious one. But gradually, the fire started spreading, and soon I was promoted to being a powerful ideologue bent upon destroying the left revolutionary movement in Kerala. I was nobody in the party, just an ordinary member in a branch, not even a branch secretary. But I was depicted as the intellectual leader of a national revisionist faction that included even politburo members. In Kerala, it included Pinarayi Vijayan, Thomas Isaac and a whole lot of the so-called official faction. The faction fight within the party had already come out in the open. The faction following Comrade Achutanandan (interestingly, not led by him) spearheaded the attack on me. Soon, it became clear that the target was not really I, but Thomas Isaac and Pinarayi Vijayan.

The anti-left media saw this as an opportunity and blew it out of proportion. During the last quarter of 2003, almost every newspaper in Kerala was carrying several news items about me and my Fourth World. Some of my friends had collected all the references, running into several thousands, enough to share a place in the *Guinness Book of World Records*. The 'official' faction of the party, Isaac and the others thought that an easy strategy to defuse the controversy would be to join hands with the other faction and focus the attack on me. I was away in the USA with my children while most of this anti-Fourth World campaign was raging. All I did was present an academic paper at a science congress about the 'Concept of a Fourth World' in 1998 and write a chapter on it in a book on decentralized planning. The scandal fed on itself, and soon, a situation arose where the only way to extinguish the blitz was to expel me from the party.

I found the whole episode quite hilarious. I simply could not understand why so much noise was being made. While all this was going on, the state secretary of the party never called me or asked for an explanation. It seemed to me that they had decided that expelling me would create the least amount of collateral damage. I was served a charge sheet and asked to reply, which I did. But I don't even know if anybody read my reply. Here is the English translation of the charge sheet and my reply.

The Charge Sheet

CPI(M) State Committee
06-01-2004

Comrade,

The positions you have expounded in some of the books, articles and notes published by you recently deviate from Marxism–Leninism and party policies. The position you had in the party's education and publications' fields and the position you hold in the All-India People's Science Movement have caused confusion among party ranks. You have committed mainly three mistakes.

1. You have assumed a position different from the positions of the party in evaluating contemporary international tendencies.
2. Your approach towards Indian revolution is non-class and apolitical.
3. You have committed a grave breach of discipline by proclaiming the above positions publicly and propagating them.

International Situation

The international situation caused by the collapse of the socialist system has raised several political and ideological issues. Many of them are to be further studied. The document 'Some Ideological Issues,' approved by the fourteenth Party Congress says: 'The CPI(M), taking into account the evolution of the socio-economic systems of both contemporary capitalism and socialism, considered both at the world level as well as in each country, is committed to carrying out a deeper analysis...' (Section 8.2).

But the framework of your studies and enquiries is quite different from the positions approved in the 'Some Ideological Issues'. You have deviated from the party positions essentially with respect to three issues.

Fourth World Concept

A first world consisting of imperialist countries and developed capitalist countries, a second world consisting of socialist countries and a third world consisting of undeveloped countries—this is how the party classifies the world. We also speak about the contradiction among imperialist countries, classification of the third world into oil-rich countries, newly industrializing countries, middle developing countries and backward developing countries. We never use the concept of the 'Fourth World'. But you have kept one full chapter to explain the new concept in your book, *Decentralised Democracy in Kerala: 1958–1998*. 'Fourth World will be one built on the foundation of the experience of the humankind till date' (p. 109). This new concept is against the party's understanding. The party programme states this: 'The only alternative

to capitalism is socialism. So the central contradiction of the epoch continues to be the one between capitalism and socialism' (Chapter 2, Section 8). But your understanding is different from the basic understanding of the party: The document adopted at the fourteenth Party Congress says: 'The CPI (M) continues to adhere to the understanding that the present day world developments can be comprehended only by a proper study of the four fundamental contradictions of the present epoch, viz., between the forces of world socialism and imperialism, between imperialism and the peoples of the developing world, between imperialist countries themselves and between capital and labour in capitalist countries.

In effect, you have rejected the party understanding about the world contradictions and conflicts.

Deviations in Socialist Construction

The 'Ideological...' document discusses in considerable detail the setback experienced by the socialist world. Deviating from a comprehensive treatment, you have given an explanation based solely on subjective factors. The absence of inner party democracy and general democracy, the ascendancy of a consumerist culture, etc., are the reasons you attribute to the deviations of the left. You also refer to the failure in dealing with nationality issues (*New World, New India*). But, as mentioned in the 'Ideological...' resolution, several other factors too are to be taken into account to understand the failure. Peculiar problems of constructing socialism in a backward country, problems of economic management, forms of property, the connection between planning and market—all these are important. You have not taken into account these factors and thereby you have put forward essentially an idealistic explanation for the collapse

of the socialist construction. It is this philosophical deviation that prompted you to project a Utopian Fourth World dream instead of carrying out the ideological struggle for socialism based on a concrete and objective world socio-economic situation. An examination of your evaluation of Socialist China will make this clearer.

Chinese Economy

One of the cornerstones of the party's understanding of the international situation is the firm belief that China, Vietnam, Korea and Cuba continue to remain socialist countries. You question this too. You criticize that China is quickly moving towards capitalism. About China, you say: 'Operation successful, patient died. Economy grows. People's life weakened. What else will happen if the party and the government shout from the rooftops that to amass wealth is not a sin but a godly act?'' (*New World, New India*, p. 27) Your position is diametrically opposite to that of the party.

Indian Revolution

In your *New World, New India*, you have tried to give the picture of the egalitarian India of your dream. Chapter six of the party programme gives an elaborate exposition of the New India. Yours is a utopian approach forgetting the economic structure described in the party programme.

The struggles and activities for New India are to be carried out based on a People's Democratic Front (PDF). You refuse to say anything about anti-monopoly, anti-imperialist, anti-feudal struggles and the PDF under the leadership of the working class based on a strong alliance with the peasants.

In your treatment, there is no reference to the leadership role of the working class or to proletarian revolution. Having rejected such a revolutionary stance based on Marxism-Leninism and the party programme, you have fallen into a revisionist, non-class, apolitical approach.

In a semi-feudal country like India, people's science movements and science popularization have an important democratic task to perform. Science movements have a major role to play against the abuse of science by the ruling class against the people and to build alternatives based on self-reliance. That is why the party maintains a sympathetic attitude towards the Kerala Sasthra Sahithya Parishad, consisting of members from different political parties. The AIPSN too is supported by the party for the same reasons. But you, while interpreting the tasks of the science movements, want it to take on the responsibilities of the party.

About decentralization of powers too, you have only a one-sided concept. The party has a clear understanding of it. The document published by the party on people's plan deals with this issue. The document points out to two types of deviations: One, the illusion that all problems can be solved through decentralization without a change in the national framework; two, a position that only after defeating globalization and the new economic policy anything can be done to solve people's problems. Only through activities to ameliorate the day-to-day problems of the people and strengthening their self-confidence through self-reliant activities, within the existing constraints, we can strengthen our resistance towards the new economic policy and globalization. The party formulated a programme based on this. In the struggle for social revolution, decentralization of power is an idea to be held aloft. It is not a panacea for all problems.

Organizational Deviation

Party members have forums to express independent opinions about policies and approaches of the party. Being a member of the branch associated with the AKG Centre, you have your right to express your opinion there. Instead of adopting this democratic method, you have broken party discipline and propagated anti-party news among the public and organized discussions on them. Though formulated as questions to be discussed, this is an open repudiation of the party position. This is a grave breach of discipline. Your explanation regarding these may be given to the State Committee within ten days.

The Reply

18-01-2004

Comrade,

My explanations regarding the issues raised in your letter dated 06.01.2004 are given below:

1. I am surprised to know that some of the ideas expressed in some of my recent books and articles have brought confusion within the party rank and file. They were only open enquires about the future. So far, they have been understood in that way only. Many of them had been put forward thirty years ago in the *Chintha Weekly* and other publications ('Science and Technology: A New Policy is Required', *Chintha*, 1974). I believe that some enemies of the movement consciously misinterpreted them and implicated anti-party ideas

in them. The media gave this unusual coverage. Some party leaders encouraged this. This is, according to me, the reason for the current confusion. I have been sharing most of these ideas in the form of anxiety with many senior party comrades since long.

What I have tried is to do a bit deeper study, as suggested in the document, 'Some Ideological Issues'. Even while I was involved in theoretical activities, I considered such studies as my party duty. The idea of repudiating positions adopted by the party never occurred to me, even in my subconscious mind. Section 8.2 of the said document bemoans theoretical stagnation. What is the nature of this stagnation? How can we get out of it? This was my enquiry. Such enquiries cannot be successfully carried out by an individual or a whole party branch. Many of these issues had been discussed in my branch, but we were unable to resolve even the most miniscule of problems. I never felt that such theoretical enquiries are to be carried out secretly and, to use Professor Vijayan's flowery language 'in rooms shut off from wind and light'. When they are put into practice, it shall not be against the strategy and tactics of the party. This has to be ensured.

So, I tried to share my ideas with as many people as possible and discuss with them. That is why I organized a one-day discussion of left economists in June 1990 to formulate a people's alternative against TINA. Only a few people like Arun Ghosh, S.P. Shukla, H.K. Paranjpe, Amaresh Bagchi, could participate, besides the activists of the AIPSN. However, I had discussed the necessity of such an alternative with Ashok Mitra, C.P. Chandasekhar, Prabhat Patnaik, I.S. Gulati,

Venketesh Atreya, etc. It was to attract more people into this discussion that the book, *New World, New India* was published in 1994. That also did not evoke much discussion. It was under these circumstances I circulated 'A Few Questions to be Discussed' in June–July 1997. They were circulated to Comrade Sitaram, Prakash, SRP, PRC, VS, MAB, Pinarayi, etc., from our party and comrades Chathuranan Mishra, K. Govinda Pillai, etc., from the CPI and also amongst friends within the AIPSN. Unfortunately, even that did not evoke any response, positive or negative. It was then that Comrade Chandradutt of COSTFORD, Thrissur, took the initiative to organize a discussion on this. About forty to fifty people, including comrades V.V. Raghavan, M.A. Baby, and K. Venu, Raju, etc., participated. Everybody appreciated that such a discussion was organized. To study each of the issues raised more deeply and present them in a later discussion, twelve study groups were created at that time.

Later, I wrote a pretty long letter to comrades Pinarayi, VS, SRP, M.A. Baby, Prakash, etc., suggesting that one of the first activities of the EMS Academy should be such theoretical studies. I suggested a three-month-long workshop. Its probable cost, source of revenue for the same, etc., too were given. It was not necessary to wait for the construction of a centre for the academy. 'We shall do it, but it will take time', this was the reply given by many of them.

I never imagined that I was conducting a serious breach of discipline through all these. None of the comrades even suggested this to me.

Some comrades were in disagreement with the stand of the KSSP and me on some issues, especially on issues

related to the environment. They never approved our stand *against* nuclear power station or *against* Silent Valley projects or *for* thermal stations. They accused us of becoming pawns/agents of imperialism publicly. The party rejected that argument and advised that scientific discussion could go on, but should not cross the limits of decency. The party had only encouraged discussion on scientific theoretical issues. Now, for the first time it has become breach of discipline. What led to this? The starting point is the article of S. Sudheesh in the journal *Paadhom*. What was its essence?

- People's planning is a CIA–World Bank-sponsored programme.
- The concept of resource mapping is American. It was a ruse for obtaining information.
- Decentralization weakens state government, weakens class struggle.
- The new curriculum of education is to help imperialism.
- Boycott of Coca Cola, promotion of local soaps and other products, etc., are anti-working class activities.
- To implement all these things, Thomas Isaac and the KSSP have received foreign money.

Nobody in the normal state of mind can believe these accusations. But a lie repeated a thousand times becomes a truth—that's Goebbels' theorem. It is easy to raise a smoke curtain. 'How can there be smoke without fire?' people ask. But today, we can make smoke—chemical smoke—without fire. When these accusations lost their punch, they came out with new accusations—'apolitical,' 'anti-party,' etc. This was

done by V.B. Cheriyan, Appukkuttan Vallikkunnu and Co. It was Appukkuttan who raised it into a polemic. From there it grew and grew to the present state. What could have been their objective? Who gained by making the party antagonistic to the KSSP? Who was interested in opposing the boycott of foreign goods and strengthening of the local economy? Who was interested in diverting the party's attention from anti-people policies being implemented in quick succession by the state and national governments?

There was only one answer: imperialists and anti-people forces. This had to be taken note of. It would weaken, in effect, the party and anti-imperialist movements, especially in the context of the forthcoming election.

2. However hard I think, I cannot comprehend the accusation that I adopt 'a non-class and apolitical approach to Indian Revolution'. Here, however, I have to make one thing clear. The terminology I use for the KSSP's publications like 'Nature, Science and Society', 'Outline of the Universe', etc., is quite different from those used in party publications. For example, without naming the classes which will come under the People's Democratic Front, I define them as 'the majority which is either continuously impoverished or face the threat of impoverishment.' This changed terminology makes it more acceptable to non-party masses. I have a firm politics. It is not non-class.

I don't have any doubt as to the ultimate alternative to capitalism, that it is socialism. If I don't believe in it, my life and work so far as would become absolutely meaningless. Even socialism is an intermediary stage towards communism. This stage could be quite long, as

experience teaches us. The party programme envisages, thus, an interim period of People's Democracy that is post-capitalist and pre-socialist; such interim periods are bound to come into existence in other countries too. China even today says that they are far away from socialism. Together, these countries would form a separate category, which is not advanced or backward capitalism, which is different from the socialism of the twentieth century, which is something new in itself. 'Fourth World' is simply a word coined to denote this stage. In India, essentially it will be 'People's Democracy'. While describing the nature of this Fourth World, I have tried to incorporate certain cultural elements of a more advanced society, which may be necessary to maintain its direction. This may have led to some confusion.

The transition, through both parliamentary and non-parliamentary methods, from the present to the People's Democracy, requires to be worked in more detail. The PDF to be built for effecting this transition has been described by the KSSP since long in the following manner:

'Indian society is divided into two major camps—a majority which is continuously getting impoverished, or facing the threat of impoverishment, both absolutely and relatively and a minority which is being continuously enriched at the expense of the majority. This minority consists of the imperialist powers, the Indian monopolies and the feudal/corporate landlords. The majority consists of all the rest. These two groups—each group has different but similar classes within it—form two hostile camps and we are firmly partisan to the impoverished majority.'

This is the way we had explained the situation. I don't find any contradiction between this and the party programme except in the style of presentation—any way, I have no intention of presenting something different.

The party should be able to give more effective leadership to this collective than it does today. That is the task of building the People's Democratic Front. A variety of activities much more varied than what we have been doing till now, are to be carried out, some of which are suggested in these books and articles. The working class has to play an increasing leadership role in the formation of this front. But it will have to earn this leadership. It has to help the different elements in the PDF to shed their current identities—caste/religion/region/identities and personal loyalties—and obtain their real class identity. I have argued in the book that the PDF cannot be effectively formed as a 'Coalition of Parties' but only as a coalition of class-conscious people—workers, peasants, middle class, petty bourgeoisie, etc., and that formations such as neighbourhood groups and gram sabhas can be used as additional and effective platforms to set this up.

I have never questioned the four basic contradictions enunciated in the party programme. But I was neither elaborating the programme nor writing a book for the party. The book, *Decentralised Democracy in Kerala 1958–1998* is simply an account of the development of the decentralization process in Kerala, the role played by the communists, and later, by the KSSP in it. The chapter 'Fourth World, A New World View' was intended only as an indicative reference framework to place the experiments on decentralization and people's

participation. However, the issues I had raised in the form of 'A Few Questions', 'A Few More Questions' (1997) and 'Issues to be Discussed' (2001) are more theoretical. They involve the importance of the contradiction between imperialism and the third world in the context of neoliberalism and militarily aggressive globalization, the possibility of adopting boycott and local production as an important form of struggle, the necessity of looking into other contradictions like human–nature, man–woman, agriculture–industry, village–town, etc. This is not against the party's understanding, but only contributes to a deepening of it.

I added a few observations more than what is given in the resolution on 'Some Ideological Issues', on the collapse of the experiment in the USSR. I was a student in Moscow from 1962–1965. My close association with Soviet comrades, my experience with common people, reading fiction, non-fiction and contemporary publications in the original, etc., had led me to those observations. They were anxious to overtake the US in everything—including conspicuous consumption. That was the spirit in which they understood the formulation 'to each according to his needs'. There was no understanding about the pseudo-needs created by capitalism for its own existence. I had argued that it was neither possible nor necessary to 'catch up with and overtake the USA' in its wasteful consumption. On a global scale, it is impossible due to the paucity of natural resources, due to conflicts and wars, ensuing from competition for them, and finally, due to global environmental changes caused by it.

I had also noted that the Soviet party had alienated itself considerably from the people. These I have

discussed with party comrades there and then. The document on 'Some Ideological Issues' recognizes this (Sections 5.3.9 and 5.4.5). If I have committed any serious blunders in the assessment of the fall of socialism in the USSR, it may be pointed out so that I can correct them. True, I have not dwelt much upon the external factors, which are only too well known. The contribution of the backwardness of Russia at the time of revolution towards its fall seven decades later requires a deeper analysis. I had, however, no hesitation to call the Soviet Union of the sixties the closest nation to a 'Paradise on Earth'. Having achieved such levels of scientific-technical progress and welfare, it is not going to be easy to establish any causal relationship between the initial backwardness and the final collapse in the eighties.

It was the excitement and inspiration obtained from the Soviet experience that prompted me to resign my position in the BARC to become a full-timer of the party. Even today, I don't regret that decision.

On China

I had opportunity to visit China three times in the past ten years, two of them on invitation from the Chinese Academy of Social Sciences, and one in 1992 as member of a government of India delegation on education. I travelled in several cities and villages, interacted with party functionaries as well as academics, students and ordinary people. I have seen personally the phenomenal growth of economic inequality, banners proclaiming 'It is a Virtue to Become Rich', increasing unemployment in villages, villages without even one sanitary latrines, etc. I had talked to

Chinese comrades and read their publications. In 1992, while visiting as a member of the Indian delegation, I was told by one of the Chinese government officials that ‘we are capitalist in economics, socialists in politics’. I asked, ‘Won’t your economy finally decide your politics?’ He exclaimed, ‘Oh, you are talking like an old-fashioned communist.’

They do not claim any more that theirs is a socialist country. ‘We are doing experiments to cope with the present situation. We may have to change our ways later. We don’t want to be called socialists, capitalists or anything else. We are we. Naming is your business,’ this was what they said.

Under such circumstances, is it absolutely necessary to maintain a position that China remains a socialist country? Won’t that make a ridiculous situation, as we experienced on the eve of the fall of Romania? Where do we discuss these things? Should it be done exclusively within the party? Are not non-party people too interested in it? Are they not assessing and discussing such issues? Is it such a grave mistake that I shared their concerns? My assessment may be wrong. It can be corrected. But how can the act of discussing be anti-party?

Science Movement

I have been accused of interpreting wrongly the functions of a science movement and extending it to the domain of the ‘party’. This is unfortunate. The KSSP has members and sympathizers of different parties. Many are not members of any party. In 1973, the KSSP adopted the slogan ‘science for social revolution’. This is a political slogan. The KSSP has never hesitated to declare that it is political, in the sense that it is partisan to the impoverished majority (the component of the PDF) and against the minority, which is impoverishing

them. But the domains of the KSSP and science movements are different from that of political parties. So the KSSP has declared time and again that it is not a political party. In the fight against imperialist globalization, science movements have a specific role, which is different from that of the political parties. It is with this in mind the Swashraya Samithi was formed in 1992; dozens of leaflets were published; *padayatras* were conducted; the nation-wide Hamara Desh programme was organized in 1993; boycott of colas, products of Hindustan Lever, Nestle, Cadbury etc., were initiated; and steps to strengthen the local economy through local production and consumption were taken. These cannot be undertaken by the party alone.

I have never projected decentralization and people's planning as a panacea, never rejected the class struggle, never questioned the leadership role that the workers can play. Decentralization helps open up several new fronts for struggle and provides opportunities for mass participation. This is exactly the stand enunciated by Comrade EMS in his dissenting note to the Ashok Mehta Committee. The neighbourhood groups, the gram sabhas and the panchayats are broad platforms for class struggles. However, their relevance will not cease with the PDR. They can become the basis for real Soviets. We have to consciously make use of them.

To Sum Up: On Breach of Discipline

- I consider Marxism a science. I have tried to learn and teach Marxism on that basis. The approach in my book, *Dialectical Materialism* is nothing different.
- The party has always encouraged discussion on science, including Marxism. This is obvious from the party stand toward the Silent Valley polemics.

- My studies during the last decade and a half come under this category. I had raised most of these issues as problems to be addressed in a scientific manner. It never occurred to me that they were outside the pail of science and should be discussed only in party forums. The books I have written, the discussions I have participated in, the issues I have raised—all this was done with the spirit of Marxism as a science.

It is difficult to give a satisfactory written explanation to the allegations raised in the letter, much of which arise from lack of proper communication, which demands face-to-face discussion. So, my request is to give me an opportunity for collective discussion on the issues I have raised and the allegations on me, without writing me off as an enemy of the party. Once I am convinced that there are mistakes in my concepts or actions I won't hesitate to correct them. Requesting that I may be given such an opportunity,

With greetings,
Comradely yours,
M.P. Parameswaran

No such opportunity was given and I was formally expelled from the party on 15th February 2004. I heard it on the TV. But it didn't shock me. The party might have expelled me, but I have not gone out of the party. Lack of membership does not, in any way, prevent me from working for the poor majority or for social revolution. I have learned Marxism as a science, and for me, the slogan 'science for social revolution' flows directly from it. It is nearly a decade since the party expelled me, but there is no animosity from any side. Party leaders, both at the

state and national levels, are my friends. The doors of the party offices in the states and at the centre are always open to me.

Stranger Than Fiction

The NGO union leader Chellappan Pillai once said, ‘EMS had to play almost all roles in life, but he is yet to act as a midwife.’ He was critical about various people requesting EMS to play roles, for which he neither had the time nor mind space. He had to do it because of personal friendship or due to party considerations. Something like that fell on my lap too. Strangely, it had to do with EMS.

I have mentioned this earlier, but let me now talk about it in detail. In November 2006, I had just returned from Delhi when my wife told me that Shaji N. Karun, the film-maker, had phoned several times and I have to call him back. I knew Shaji since his student days. His wife Anasuya is my good friend PKR’s daughter, and Sheela, his sister, is married to Krishna Warriar, Anasuya’s older brother. So Shaji is a family friend. I called him back and he told me that he was making a docudrama on AKG.

‘Yes, I heard about it,’ I replied.

‘I want you to play the role of EMS,’ he said.

I was taken aback. ‘No. No, I can’t do such a blasphemous thing.’

He said, ‘I asked several people. Everybody felt that you should do the role. It is about AKG. Your role will be short, but important and unavoidable. You are best suited because of many things—not only because of your physique, but also your mind and thought.’

I kept saying no, but he wouldn’t listen. Finally I had to agree, more out of respect for AKG. I couldn’t let a film on his

life suffer because of my diffidence. The next day, the *Malayala Manorama* daily came up with this newsflash: 'Expelled Parameswaran back in the party in the role of EMS'. But I was not back in the real party. Only in the make-believe party!

The film was shot at Kayyoor. When they did the make-up, even my close friends from the KSSP could not recognize me. On the whole, my role was only two or three minutes, but retakes, dubbing, etc., were all very tiresome and boring. I have great sympathy for actors who have to suffer it day in and day out. I won't act again. I obliged Shaji, and that's it. In fact, I don't like 'acting'. And there are so many real things to do actually, then why act? Looking back, I feel quite lucky not having had to fight elections and become an MLA or MP. (I am an MP, but of a different kind!). That would have forced me to play several parts. I escaped it basically because I chose to.

To summarize my experience of the last decade, I find a lot of reluctance on the part of the left intellectuals and activists to engage in a serious debate about any alternative path for socialism of the twenty-first century. I believe that tinkering with the present theory and practice will not suffice to change the present world. Bold new thoughts are required to do that. I had been writing on and experimenting with several such concepts. I shall now end this narration of my dreams and in the next chapters attempt to put down my views of a post capitalist, new socialist society—a different kind of dream.

In Defence of an Ideology for a New Society

‘We do not know where we are going. We only know that history has brought us to this point and—if readers share the arguments of this book—why? However one thing is plain. If humanity is to have a recognizable future, it cannot be by prolonging the past or the present. If we try to build the third millennium on that basis, we shall fail. And the price for failure, that is to say, the alternative to a changed society, is darkness.’

– Eric Hobsbawm

This is the concluding paragraph of Hobsbawm’s book, *The Age of Extremes: A Short Twentieth Century, 1914–1991*. This book was written a decade back and now it is clear, where we are going. The fairly old question, ‘What comes after capitalism? Socialism or barbarism?’ is being answered. We are moving towards barbarism, or perhaps, towards extinction. The crisis is much more a cultural one than an economic or political one, and is related to the culture promoted by capitalism.

Every erstwhile socialist country, not only China and Russia but also Vietnam and Cuba, apart from other third world countries, wants to ‘catch up with the USA’ in its wasteful consumption levels. In India, and in other countries too, in the metropolitan cities as well as in small towns, this culture is gaining ascendancy. Everywhere there is a minority that is very

rich and is at a loss on how to spend their income. They are the trendsetters.

It is a well-documented fact that inequality between countries and within countries has been increasing and has reached threatening dimensions. Natural resources are getting depleted at alarming rates, particularly oil and potable water. Imperialist powers are competing among themselves to gain control of the remaining sources. World War II never really ended. It continued in the form of aggression on the third world countries like Korea, Vietnam, Cuba, Chile, Nicaragua, Guatemala, Afghanistan, Iraq, Iran, North Korea—the list includes the entire world. However, resources being finite, it is a simple arithmetical truth that exponentially increasing utilization can be sustained only for a very limited amount of time

Resources are getting depleted, sinks are overflowing. An ecological chain reaction has already been initiated, which is most visible in the increasing vagaries of weather and its medium/long-term unpredictability. Decades ago scientists feared that even a small increase in the average temperature of the atmosphere meant an unimaginably large increase in its energy content, which would upset its existing, delicate, dynamic stability leading to increasingly unstable weather conditions and altered climate. This has come true.

Increase in inequity, depletion of natural resources and degradation of the environment are inseparable from the capitalist system. Either we reorganize societies, as Hobsbawm says, or face certain degeneration into barbarism. What is the other alternative? The only concrete answer is: socialism.

We have had some experience with it in the twentieth century, but were not happy. Though the twentieth-century socialist societies attacked the problems of inequality and humans exploiting other humans, they failed to recognize the

harms of resource depletion and ecological degradation. The situation with equality was far from satisfactory. Even in the heydays of socialism, income inequality in the socialist countries was higher than that in the welfare capitalist Scandinavian countries. There was no democracy in the socialist countries and party bureaucrats were considered to be 'more equal'.

Given this scenario, something else has to be conceived of and strived for, which (i) can ensure a high level of internal compatibility amongst economics, politics, ethics and culture; (ii) is able to solve problems of inequity, resource depletion and environmental degradation; and (iii) can guarantee inter-generational equity. Only a new ideology, a new philosophy can meet these requirements.

Four decades ago there were people who shuddered when they heard the word 'ideology'. They equated it with Stalinism, which they hated more than capitalism, to whose ideology they turned a blind eye. They called all ideologies grand narratives and accused them of always being violent. In fact, they were propagating an ideology of 'then and there, each by herself/himself'. This, according to me, is patently contradictory to the evolutionary character of the human species. The species survived because of a 'one for all and all for one' ideology, an ideology of cooperation and not of absolute and universal competition.

In 1985, during a national workshop on education, a highly educated participant observed: 'I think we should not educate the public because the more educated one is, the more cruel and selfish one becomes'. In 1990, a renowned professor in IIT Delhi accused me of committing aggression on people by trying to make them literate. He said that people had chosen to be illiterate and asked me what right I had to create an environment in which they felt unhappy about being illiterate. Unfortunately, all of us, including him, commit hundreds

of such aggressions daily even while carrying out a simple conversation, through the process of occupying millions of neurons in the listener's brain. Opposition to ideologies and grand narratives comes under this category of opposition to literacy and education.

Everybody who is alive has an ideology. She/he would have internalized one narrative or another. For a totally isolated tribal community, their own narrative might seem fully satisfactory to them and may become their grand narrative. But most of us live in societies that are globally interconnected. Many problems we face do not have local solutions, only global ones. We cannot find these solutions without the help of grand narratives, which help us to understand where we are, how we reached there, what prevents us from moving further in the direction that we chose, and what bondages limit our freedom.

I want to argue that rereading Marx and interpreting Marxism differently from mainstream Marxists of the twentieth century can provide us the basic elements of such an ideology. There are certain boundary conditions put by Marxism that have been overlooked by practitioners till now:

1. The gradual dissolution of the difference between village and town, between agriculture and industry (i.e., against metropolises like London).

'Combination of agriculture with manufacturing industries; gradual abolition of difference between town and country by a more equable distribution of the population over the country.' (Karl Marx and Friedrich Engels, *The Communist Manifesto*, 1848)

'The more a country proceeds from large scale industry as a background of its development, as in the case of United States, the more rapid is this process of destruction.' (Karl Marx, *Capital*, Volume 1, 1867)

2. Emancipation from alienation. This requires not only changes in production relations and development of productive forces, but also redefining the objectives of production—for consumption and not for profit. The passage from *The German Ideology* referring to the freedom of activity does not mean unlimited abundance, but wisdom to distinguish need from greed. That ‘man is on the threshold of liberation, that he can from now on embark upon truly human avocations’ too does not mean unlimited abundance. Unlimited abundance demands not only limitless resources but also ever-increasing labour time in spite of enhanced productive forces. The ‘catching up with the USA’ slogan is based on increased abundance, and consequently, increased alienation.
3. Emancipation demands participation. Real participation is only possible in a democracy. Both demand smaller scales of operation. People can have better control over the local economy, politics and culture. If global issues predominate in the impact on their lives, there is no freedom or emancipation. So strengthening of the local economy in relation to the global economy is an essential precondition for the success of socialism.
4. If the local economy is to succeed small-scale production has to become effective. Small has to become powerful, not merely beautiful.
5. Socialism demands intergenerational equity or sustainability. This would ultimately require total reliance on fully renewable and recyclable resources. Sun is the only source of renewable energy today. Without solar energy there cannot be any socialism or communism. Further, production technologies will have to be revised so as to make total recycling

possible. This is also important from the point of view of regenerating and protecting the environment.

All these concerns will have to be integrated into the ideology of the new society. It cannot be intelligently shared unless more concrete and certain questions are answered.

Elements of a Worldview

Development

Total material production will not continue to increase exponentially as it does today. The rate of growth will slow down and asymptotically approach the desirable level. In case of underdeveloped countries, the rate of growth may increase to begin with, before deceleration sets in. In the case of developed countries, even absolute production will have to come down. Their leisure time will increase and they will become more and more emancipated. Human population too cannot expand indefinitely and has to be stabilized. If not, the future is bleak. Even the present is unpleasant. How soon and at what level the population would stabilize is debatable. People expect it to stabilize by 2050 at anywhere between twelve and fifteen billion. This earth can support such a large population if we are able to avoid wastage and ensure sustainability. As far as production of goods is concerned, it has (i) to come down for developed nations, and (ii) go up for underdeveloped nations. The stable point might be set at 10–12 per cent less than the current level of consumption in the developed countries and at five to eight times more than the current level of consumption in the underdeveloped countries. For the countries of Asia,

Africa and Latin America, substantial improvement in the availability of food, clothing, housing, health care, education, etc., is called for. Here, we have to integrate three important components: (i) spatial habitat pattern (ii) spatial distribution of resources, and (iii) distribution of the control over resources. Today, these components are at loggerheads with each other. In areas of high population we have comparatively less resources, while countries rich in resources have small populations. The control over resources is even more skewed, where resources all over the world are under the control of a minority in a limited number of nations. Population is prevented from moving from one area to another, while resources are forcefully carried away. But the habitat pattern within a country can be planned and its resources can be brought under the full control of its people. With the help of science and technology, new resources can be found and limited resources can be recycled repeatedly. With some imaginative planning, the distance to be travelled by members of a family or a community, not by choice but by necessity, can be brought down considerably. The cancerous urbanization, so eloquently opposed by Marx, is leading us to increased travel time, bumper-to-bumper traffic conditions and road rage. This can be prevented. Further, more and more wants can be converted into resources with the help of science and technology.

Equality

One picture that becomes progressively sharper as we look into the history of humanity is that of concentration of wealth in fewer and fewer hands. The gap between haves and have-nots has been gradually increasing. The word 'millionaire' has given away to 'trillionaire' and 'multi-billionaire'. The wealth

of people like Bill Gates or the Sultan of Brunei is beyond the comprehension of the human mind. It is something akin to the distance from the stars, the nearest of which is four million million kilometres away. The wealth of Bill Gates is 25 million million rupees. What does that mean? The GNP of Kerala is only 0.6 million million rupees, which means that Bill Gates can purchase the whole of Kerala and Tamil Nadu with his wealth!

Absolute poverty is increasing in many parts of the world. Relative poverty is increasing even faster. The majority of the people in the Indian states of Bihar, Orissa and others as well as most African countries live in abject poverty. At the same time, metropolitan cities like Mumbai, Delhi, Beijing, Shanghai, Manila and Colombo are centres of vulgar richness and extravagance, bursting at their seams with five-star hotels, luxurious holiday resorts, casinos, etc. Their wastage and extravagance can fill any sensitive human being with a sense of disgust. The New World will incessantly fight against such immoral inequalities and eradicate them. The interim objective will be to reverse the trend of enrichment and impoverishment to establish processes of decreasing inequalities. Economic planning can be organized to further this goal. A small example will illustrate this.

The economic foundation of Kerala is weak. It is clear that to strengthened it, the per capita income of the state needs to be doubled and trebled. There are various ways to achieve this goal. We can strengthen primary sector activities like agriculture, fishing and animal husbandry. We can modernize and improve traditional industries like coir, cashew, handloom, brick and tile. We can start new agro-processing industries based on mango, jackfruit, banana, papaya, vegetables, tapioca, coconut, fish, meat, etc. We can

strengthen conventional heavy industries like aluminium, zinc, caustic soda and chemical fertilizers. Alternatively, we could set up modern industries dealing in electrical, electronic and mechanical products—machine tools, computers, components, control equipment, etc. We could opt for frontier areas like software, biotechnology, tissue culture, GM products, high-tech tourism and express highways. Each choice has a different impact on income distribution. Primary sector, agro-processing and traditional industries will preferentially help the have-nots, whereas modern and frontier industries will make the rich richer. Even agriculture can be planned in a way that only the rich benefit from it. Through conscious planning, one can generate economic activities that would preferentially benefit the poor and thus reduce the poor–rich gap. Unfortunately, neo-liberal globalization insists on the opposite. Following its advice, the rich are becoming richer and the poor are becoming poorer. This has to be resisted.

Security

Just like food, clothing and shelter, security too is a basic human need. Security is the guarantee that one, along with one's children and one's children's children, is assured of these basic necessities, including education and health care. If society can assure each citizen that she/he and their offspring will be taken care of, provided with all the basic needs, have the right to work and earn a livelihood, then the tendency or necessity to amass wealth by hook or crook can be curbed. The second-generation citizens of the erstwhile Soviet Union had experienced this. They never had any anxiety about their own future or their children's future. The downfall of the system

was not caused by the selfishness of the people, but by the degeneration of the party leadership and the bureaucracy and the absence of a corrective mechanism, among other factors. When the means of production come totally under society's control, it is easy to give this assurance. Besides the needs of the existing generation, those of the future generations too can be foreseen. Even during the transition stage, much can be done. The various insurance schemes—of life, education, health, vehicle, home, etc.—are indicators of what is possible. Instead of individual responsibility, this can be made into a collective programme. Can we extend their scope? Some programmes that can be thought of are:

- (a) Statutory and universal public distribution system can be instituted, extending the products to all common needs.
- (b) Quality of public education can be improved, as also the physical amenities associated with it, and allow it to be free.
- (c) Quality of services in all health-care institutions, from primary health centres (PHCs) upwards can be improved as well as physical infrastructure can be upgraded.
- (d) That no child is undernourished can be ensured. Quality and quantity of school feeding can be improved by providing breakfast and evening tiffin besides a midday meal. Free 'kiddies' kitchens at walking distance from home for night and holiday meals, etc., can be instituted.
- (e) Income earning employment/activity for all able-bodied persons can be ensured. Necessary support can be provided to those who are sick or old.

One can calculate how much extra social expenditure is required to carry out these measures. One can also explore whether these can be carried out at sub-national levels. A back of the envelope calculation shows that 5 to 8 per cent of the GNP would suffice for most of this. Savings from wasteful expenditure on goods and services without any welfare value would be sufficient.

Sustainability

A system that allows a few to live in five-star hotels and condemns the majority to live in slums is immoral. We try to build a world of equity. But if in the process we waste the limited natural resources, pollute the air and water, cause irreversible damage to the environment, then future generations are denied the right to even the basic needs. This shatters inter-generational equity. For humans who worry about their children and grandchildren, this path is not acceptable. We want to see that our children live better than us and not worse. Each successive generation should have a better quality of life. This is the essence of sustainability. Nobody has put it more beautifully and more powerfully than Karl Marx. In *Capital* Volume III (1894), he wrote that humans ‘are not owners of the earth. They are simply its possessors, its beneficiaries, and have to bequeath it in an improved state to succeeding generations as *boni patres familias* (good heads of households).’

There are two conflicting requirements—improvement in the quality of life and long-term sustainability. The first demands, as per current thought, increased consumption and the use of natural resources. Should we put limits to consumption? What do we mean by long term? Millions of

years? Hundreds of years? A few generations? Definitely not a few generations. We are speaking about thousands and thousands of years, at least, and this demands drastic changes in the consumption pattern. We have to develop absolute recyclability, which would be the big challenge before science and technology.

There is only one source of energy that can be used for millions of years, that is, solar energy. Fossil fuels will be exhausted within a few decades, but we can obtain as much energy as we need from the sun. Technology has to be developed to extract it efficiently and sustainably, and it should be possible to do this in a distributed manner and on smaller scales.

When the desired material exists in nature in a concentrated form we call it a 'resource'. Use of this resource leads to dilution and transformation. For example, carbon in coal becomes carbon dioxide on burning and gets distributed in the atmosphere. It is difficult to get the carbon back from this CO₂, though not impossible. Plants do it through photosynthesis. None of the resources we make use of really disappears. It is only transformed and diluted, be it iron or aluminium, zinc or mercury. They are there in the soil and in the sea. Once we develop technologies that can extract these individual metals and other materials back, using only solar energy, then the problem of resource scarcity will be solved forever. Instead of spending money and effort to develop weapons of mass destruction and commodities with no welfare value, scientists and technologists can be asked to work on this problem.

Already humankind has released pollutants into the environment in unbearable quantities. On the one hand it is leading to climatic changes, and on the other the entire biodiversity and life itself are under threat. Nuclear wastes, which cannot be transformed, are a permanent source of danger. They are under 'safe custody' today, though this safety comes

at a cost. How can these wastes be converted into resources? There is no dearth of challenges for scientists and technologists.

It is obvious that the entire production process needs to be restructured. To help this, we can define a few more concepts like wastage index, dehumanization index, participation index and self-sufficiency index.

Welfare Value

This is a new concept. In economics we are familiar with use values and exchange values. Welfare is a socio-economic category. Society values certain uses and abhors certain others. Food satisfies hunger and sustains life. We can't live without it. If there is less of it, we feel miserable. Food has high welfare value for society. For hoarders of food grains, their shortage has high welfare value. Weapons are not liked by anybody, but are often accepted as a necessary evil. For military bosses, they have high welfare value. But we are speaking about the welfare of society and not of a few individuals. There are, of course, a large number of products whose welfare value is suspect. We can categorize goods and services into those which the masses can enjoy (mass goods) and those which only the rich or very rich can enjoy (class goods). The welfare value for society of the latter is smaller than the former. Therefore, more resources will have to be channelized to produce mass goods. The welfare value of many goods depends on social perception. The criteria to be applied then are:

- i) Who are the consumers?
- ii) What is the impact on natural resources?
- iii) What is the impact on the environment?

Wastage Index

There are certain interesting facts in the history of the human civilization. One fact is that the distance humans are required to travel over a lifetime has been continuously increasing. These are not pleasure trips, but forced travel to earn a livelihood. The more developed a society is, the larger is this distance. For example, people commute from Kalyan, and even Pune, to Mumbai and back. Imagine the plight of a housewife who has to do all the housework and then travel from Thiruvananthapuram to Kochi and back on a daily basis. This is the price we are forced to pay for 'progress'. The distance travelled by an average American citizen throughout his/her lifetime for work is far higher than by an average Indian for the same reason. The unscientific organization of habitat and employment is the culprit. So also automobile manufacturers. Not only distances travelled by humans but also distances for the transportation of commodities have increased. A century ago, most of the goods required for the subsistence of a community used to be made within that community or in the neighbouring community. Today, most of these commodities travel from one continent to another. Production is concentrated in locations that offer maximum profit. Raw material and finished products are hauled over thousands of kilometres. Much of the hidden expenses in this are borne not by the capitalists, but by the people. Capitalists are concerned only with their individual profit. It should be possible to reduce the forced travel distance of humans as well as of commodities. The quantity waste index is used as a measure of the present situation. It has two components: citizen travel index and commodity haulage index. The citizen travel index is defined in terms of the average distance travelled by a citizen per year. Tendencies are more important than absolute values. To what

extent this has decreased or increased over a definite period of time, say ten years, is what we are interested in. It is desirable to reduce the time and distance of forced travel.

Commodities are, in fact, congealed labour. This labour can be expressed in terms of hours or in dollars or rupees. A detailed list can be made of all the commodities consumed by an individual over a period of one year. Each commodity has a price and is produced at a locality close to the individual or far away. It's possible that different components of a product might have been made in different places. For example, in a box of matches, the label and chemicals could have been made elsewhere. Various commodities and elements could have travelled different distances before reaching the consumer. If we multiply the value—price—by the distances a commodity and its elements have travelled and add them together we get the consumption in dollars/rupees—kilometres. If this is divided by the average per capita consumption in dollars or rupees we get the 'distance' consumed by us. We can monitor the changes in this—increase or decrease—every year. To put it in simple terms, it is desirable to reduce forced travel of humans as well as the transportation distance of commodities. In other words, material life should be localized, as far as possible. This, however, is not applicable to culture or knowledge.

Dehumanization Index

A situation demanding more and more police and jails to maintain law and order is not desirable. It means that citizens are living in constant fear, which is really the case in the USA. Further, when a country has to spend a substantial part of its income to maintain a huge army for defence or offense, when it has to sacrifice a large number of its youth in battlefields, that

situation too is an unenviable one. Reduction in the expenses for law and order as well as defence means an improvement in humanism, the opposite of which is de-humanization. Public education and health care are two very important social needs. The ability to set apart more resources for this increases the quality of life. If we divide the total expenditure on police, jail, courts, military and administration by the total expenditure on education, health care, etc., we get a quantity that can be termed as the 'dehumanization index'. The objective should be to consistently reduce this. The US is currently one of the most dehumanized countries in the world.

Participation Index

When we speak about equity and justice there is one point that is to be borne in mind. It cannot be the charity of the rich and the powerful in the community, but a natural state of being for society. That a substantial percentage of the population has to be dependant on charity is not a prudent situation because nobody wants to live on charity all the time. That human tendency is to evade work and make money by hook or by crook is an exaggeration. Granted there are a number of very rich people today who lead a life of luxury without having done even a day's worth of work in their lives. This is made possible because of the recognition given by the people to private ownership of the means of production and capital. The majority of the people cannot live like this and do not want to either. Participation is both a material as well as a spiritual need for them.

Economic production is carried out not individually, but collectively. It is the sum total of such collective activities that constitutes society and the various types of 'social contracts'.

Each individual has a role to play not only in economic production but also in maintaining the necessary collectivity. Politics is an important part of this. Every individual might be involved in some form of public action or another. But some are full-time political activists and some are permanent critics. This is not a good division. Every citizen has to undertake and fulfil some part of the social responsibility, including politics. In India, especially in Kerala, the gram sabha is an ideal platform on which every citizen can participate. The time they spend in class organizations, mass organizations, political parties, cultural organizations, etc., all constitute what we call participation. The more time an average citizen spends in socio-political activities and the lesser the number of full-time socio-political workers the higher is the element of participation in it—social participation. An interesting comparison will be between the KSSP and a traditional NGO. In the latter, almost every person is a full-time paid member and social participation is practically nil. In the former, more than 98 per cent of the activities are carried out by the members without any remuneration, which means that social participation is the highest there.

But economic participation is measured differently in terms of production and equity ratio. The average per capita income of the poorest 20 per cent of the community divided by that of the richest 20 per cent gives a measure of income equity, reflecting economic participation. The closer it is to 1.00, the higher is the level of economic participation.

Self-Sufficiency

It is a common refrain these days that having liberated themselves from military imperialism, third world countries are now being subjected to economic imperialism. They are becoming

less and less self-reliant and increasingly dependent. In the process they are losing political sovereignty. How can they regain their sovereignty? Even within a single country there are regions where citizens feel that other regions are exploiting them. Gandhiji spoke of not only self-reliance, but also self-sufficiency. It has, however, become fashionable to argue that no town and no country can be fully self-sufficient. Increasing interdependence is the rule of the day. Unfortunately, interdependence gradually turns into dependence. We can become increasingly self-sufficient at all levels. It is argued here that self-sufficiency is neither an unscientific concept nor a utopian one. Once we start differentiating need and greed, the criteria for self-sufficiency become clearer. Needs are to be understood in terms of human development, as referred to earlier, and not in terms of mechanical consumption. To satisfy needs people have to produce, that is, convert natural resources into consumable goods. The intermediate agents are tools, skills and knowledge. These strengthen one other. Self-sufficiency increases in accordance with the growth of knowledge, skills and tools on the one hand and enlargement of the geographical area, leading to increased availability and diversity of natural resources, on the other hand. Kerala cannot be self-sufficient in rice but can be self-sufficient in calories, proteins, minerals and vitamins. India can be self-sufficient not only in food grains, but also in providing for every genuine human need. A country's or a community's self-sufficiency can be measured in terms of what percentage of its genuine human needs can be met from within. A reduction in the average commodity haulage, referred to earlier, will be possible only with increasing levels of self-sufficiency.

Things like equity, security, sustainability, efficiency, humanness, participation and self-sufficiency are all desirable. But to realize them, the entire economic-production system will

require an overhaul—ownership of the means of production, production relations, planning, decision making, producing, dividing everywhere. We shall proceed to think about them.

New World Order

This new world is to be, as Marx said, an ‘extended network of associated producers’. Or a ‘horizontally connected network of self-sufficient village republics’, as Gandhiji envisioned. Society will have the wisdom to differentiate greed from need; it will value leisure—emancipation—more than wealth; it will be equitable; each generation will bequeath the earth in a better condition to the succeeding generation; cooperation and not competition will be the guiding spirit; socio-economic inequalities, and more than that, gender inequalities will be eliminated. Such a world cannot come into existence globally in one go; it cannot be built from top to bottom. Local societies with a few of the above characteristics, which will emerge sporadically, are to be consciously nourished and helped to develop the variety of desirable features of the new society. Such societies are socially better equipped to survive ecological and economic calamities, but they are to be economically equipped too.

The New Society will differentiate goods that have genuine welfare value from those that have only vanity value. Welfare value is measured in terms of a commodity’s ability to better the quality of life—both physical and spiritual.

PQL (Physical Quality of Life) is measured in terms of decrease in morbidity and increase in longevity and leisure. The development of productive forces will be directed in a manner that increases the production of welfare values to the extent necessary as well as reduces the necessary labour time to produce them, thereby increasing leisure.

Increased leisure can be used to enhance the spiritual quality of life by getting involved in creative activities and other truly human avocations like reading, painting, singing, dancing, traveling and debating. Since such a society is based not on competition but cooperation and is not forced to accumulate personal wealth as insurance for the future of self and family, all types of crime are bound to come down.

If the human species is to flourish for many thousands of generations, we have to learn to live solely on renewable resources with the only external input in the form of solar energy. This is a tall order, though not impossible. However, it will take a long time and will require a strong will. We will have to unlearn many things and learn new things, especially to live with leisure. Today we are a racing society, running faster and faster, with no time to spare. The new society, after having satisfied all the welfare requirements, will have a lot of free time, as they will not be forced to produce vanity and destructive goods.

It is not easy to conceive of a global society with ten billion people under the new dispensation of economy and polity. So let us do a thought experiment in the next chapter of a dream village. Let us imagine a fairly small society of 4,000–5,000 families, where everybody knows almost everybody else. Let us also assume that its dependence on external societies is minimal, limited to what is absolutely necessary. Let us think about the various features that should be developed in this society. We won't be starting from scratch because we have gained some experience in Ralegon Siddhi, in Hivre Bazar and other villages.

A Dream Village

Our experimental village is about 2,500 hectare in size with 4,900 families and a total population of 23,500. It is a midland panchayat in Kerala. The terrain is uneven, with about 300 hectares of flatland and the rest has a slope varying from 5 to 30 degrees. Rainfall is around 2,800 mm and the soil moderately rich. There are no mineral sources or fossil fuel sources. But the standing biomass is of average density at 120–150 tonnes per hectare. There are about 600 hectares of forests in the village. The existing education, health care and communication facilities are above average. A leadership possessed with the desire to build a new society, a model society for the entire world has emerged here. They are embarking on a new Wardha experiment a century after Gandhiji.

The leadership consists of ordinary persons like Anna Hazare and Popat Rao Pawar, but is possessed of the conviction that ‘another world is possible and necessary’ and that the present world is unacceptable. They held year-long consultations and collective dreaming sessions involving all the citizens of the village (or shall we call them villagers or *gram vaasi*) and arrived at certain non-negotiable objectives and certain unusual codes of conduct.

The Objectives of the Village

1. Every individual should live healthily for at least eighty years. All that needs to be done to achieve this will be done.
2. The community should produce all the food that is required within the village.
3. The community should produce enough fibres to produce all the cloth required and should produce within the village or in cooperation with surrounding villages all the clothing for its people.
4. Every family should have a decent house to live in with all amenities like toilets, bathrooms, running water and electricity, with a minimum average area of 20 square metres per capita. The maximum size of a house shall not be more than 40 square metres per person.
5. Every able-bodied citizen should have an assured job, or rather a definite social responsibility, which should fetch them an income sufficient to provide their family with all the necessities.
6. The ratio between the minimum income (per unit time) and the maximum income should not be more than 1:3.
7. Managerial tasks may fetch less income than manual work.
8. Jobs should be alternated, as suggested by Michael Albert in *Parceon—Life after Capitalism*, based on the individual's preference and the consequent reduction in remuneration—a more pleasant job should get lesser monetary remuneration.
9. In case of emergencies like health care and accidents, the responsibility of its management should lie with the

entire society and not only with the affected individual or her/his family—a sort of a social insurance.

10. Health care, education, etc., should be totally free for all and should be taken care of by society. Nobody should have to accumulate wealth for the future of self or family.
11. Nobody should have to go out of the village to earn a livelihood. Each person should be able to walk or cycle from home to the place of work and back. It should not be necessary for the majority to cover large distances using motorized vehicles on a daily basis.
12. The village should be connected to the rest of the world by good surfaced roads. The railhead should be about 15 kilometres away, the airport 50 kilometres and the national highway 5 kilometres away.
13. The village should be connected to the global cyber-space, and can become a 'smart village', if necessary.
14. Every child should receive fourteen years of education and training (not up to fourteen years of age) and should become capable of discharging responsibilities put on it by society.
15. Every child should be adept at using its mother tongue and the English language as well as computers. The child should grow as a global citizen.
16. There should not be any profession like politics. Every citizen is to be involved in running the affairs of the society.
17. The legislative, executive and judiciary responsibilities should be shared by a larger number of persons, as per their own choice and the choice of other citizens.
18. Through all these measures, the ecological footprint of the village should be brought down to less than one from the present value.

The people of Swapnabhoomi (dream village) have built their dream on the basis of the following understanding.

1. Globally the capitalist system will prevail for at least two or three decades to come.
2. Atmospheric concentration of greenhouse gases (GHGs) will continue to increase. Global warming will not be averted. Temperatures will rise to the tipping point.
3. All the consequences like erratic climate, extreme events like hurricanes and storms, shrinkage of glaciers and the rise in sea levels will ensue globally. No miracle can stop them.
4. Agriculture in general and cereal production in particular will become more and more unreliable, and there will be an overall reduction in global food grain production and more so in their own village.
5. Petroleum and gas availability will continue to dwindle, prices will go up and within a decade or so, they will not be able to afford even a litre of oil. They will have to live without oil.
6. Their only source of energy will be the sun—direct heating, photovoltaic and photosynthetic routes.
7. Many metals of daily use like copper, lead and aluminium will soon become rare and costly and will be available only in recycled form.
8. There is a difference between means and ends. For example, motor vehicles are a means of covering a distance; electricity is a means to provide light, heat and motive power. They are not glued to means, but are particular about ends.

Based on these assumptions and the objectives mentioned earlier they have made detailed annual and long-term plans.

Priorities have been fixed based on the principle of 'more effect per unit effort'. Energy, food production, local small-scale industries, education, drinking water, environmental cleanliness and health care have been given first preference. The summary of the activities they have planned is given below:

Energy

The biomass production in the village is high enough to provide for all the cooking energy requirements. While in the real world, the cooking stoves used are inefficient, in the dream village higher efficiency stoves have already been developed. The first thing that was done was that all the old stoves were replaced with the new efficient ones. The excess non-timber grade biomass has been collected and fed into a gasifier to produce electricity. The annual total biomass production in the village other than food materials is 10,000 tonnes. Of this, 3,000 tonnes is timber, about 3,000 tonnes is biodegradable agro waste and 4,000 tonnes is fire food. The biodegradable agro waste and livelihood waste comes to about 8,000 tonnes per year. The villagers have built forty biogas generators (methination plants) using 500 kilogrammes per day. Each of them has been sufficient to provide cooking gas for twenty households, who have pooled the capital—amounting to Rs 4 lakhs each—required for the construction. Of the 5,000 households 20 per cent, namely 1,000, have installed their own portable methination units, requiring 15 kilogrammes of wet biomass per day to provide 1–1.5 cubic metre of cooking gas. Thus, in all 1,800 households have biogas for their cooking fuel. The slurry, containing almost all the nutrients, is recycled into their vegetable and banana gardens and the remaining

into paddy fields. The five gasifier units, each of 100 kilowatt capacity and requiring 600 tonnes of dry biomass per year, together produce 2 million units of energy per year. The total domestic demand for energy of the panchayat has been 12 million units per year and is expected to go up to 15 or 18 million units and stabilize at that level.

Presently, the dream village gets all its electricity from the grid. To begin with the domestic load will be freed from the grid, which will exclusively feed industry. Commercial load will also be freed from the grid. Today, the panchayat experiences low voltage and power cuts in the evenings due to shortage of peaking capacity. It has planned to install inverter storage units in each household to supply the entire domestic need from 6 p.m. to 10 p.m. and thus take out domestic demand from the grid during peak time. Each inverter storage unit will have a capacity of 2 kilowatt power and 3 kilowatt-hour of storage capacity (equipment like induction heater, microwave and electric iron will not be switched on during that time). In the years to come solar panels of 2 kilowatt peak will be installed on roofs and the domestic system will be disconnected from the grid for most of the time. Further, each household will have 100 litres per day solar water heater. The preheated water could be used for cooking too. Also, each household will have a hot box or insulation box, which can reduce cooking energy requirements by 10 to 15 per cent. Thus, within a period of eight to ten years, all the households in the panchayat will be fully solarized—photovoltaic, thermal, photosynthetic, gasifier and methination—together with energy saving devices and use protocols.

Most of the capital equipment will have to be imported from other parts of the country, but repair and maintenance will be done locally.

For industries and other sectors, the maximum demand is estimated at 3 megawatts and annual energy requirement at 20–25 million units of energy. This will demand a solar installed capacity of 12–15 megawatts. Rooftops of schools, hospitals, public offices, theatres, etc., can produce much more energy than they require. School courtyards will be covered for solar energy. All these will together provide about 50,000 square metres of roofed and roofable area for harvesting solar energy. This is sufficient to produce 15–20 megawatt peak power and 25–30 million units of energy.

The total cost of the entire energy project—30 megawatts of solar, gasifiers, stoves, etc.—comes to about Rs 500–600 crore. The GDP of the panchayat is about Rs 150 crore. It is expected that 50 per cent of the cost will come from state and central governments, and the rest from banks and individuals. The annual cost of repayment will come to Rs 10–15 crore, part of which will be borne by the panchayat. In this process, the carbon dioxide released from the panchayat has been reduced by 60,000 tonnes. Assuming a carbon credit of \$10 per tonnes, the total due to the panchayat comes to \$600,000 or Rs 3 crore per year.

Food Security

The panchayat has about 1,600 hectares of garden land and 250 hectares of paddy fields under various crops. There are 600 hectares of forestland. The entire area is going to be brought under precision farming, both open and under poly house, stage by stage. The area has three micro watersheds. Water conservation and utilization in each of these is going to be meticulously planned. Those engaged with and interested in

agriculture have carried out several rounds of discussions both in concepts and numbers. They have arrived at the following tentative course of action. As a prelude they have declared:

1. Every bit of land in the panchayat will be made use of. Enough labour and other inputs will be given to increase the productivity to much higher levels.
2. Agriculture will be liberated from chemical fertilizers and pesticides as quickly as possible—total liberation within ten years.
3. The entire biomass, including human and animal excreta, will be put back into the fields using appropriate technologies.
4. Due to shortage and the changed character of labour, garden land machinery will be deployed in large numbers. This will attract educated youth, boys and girls.
5. The entire labour force will be regrouped into a cooperative. The workers will not be wage earners but salaried, enjoying all the benefits of Employees' State Insurance (ESI), provident fund, gratuity, social security, earned leave, holidays, maternity leave, etc.
6. Since the bulk of the landowners have smallholdings and have other means of subsistence, they are seldom interested in agriculture. The cooperative society will lease their land as much as possible and cultivate it. Interested landowners too can become members of the society. To those who want to directly cultivate their own land, the cooperative will provide the necessary labour force.
7. With drip irrigation techniques and fertigation, the use of both water and fertilizer will be reduced.

8. Crop protection will be effected through scientifically integrated pest management in conjunction with bio pesticides.
9. Bulk of the vegetable cultivation will be brought under poly houses, managed jointly by landowners and owners of labour power, or by the cooperative.
10. The people in the village have understood that
 - (i) Global warming and climate change cannot be prevented.
 - (ii) Cereal production will come down and production will be erratic, import will not be possible.
 - (iii) Food habits will have to be changed to the old diet of the species, namely, roots, fruits, meat, vegetables, milk and eggs.
11. They have made the following assessment of food materials required to sustain a maximum stabilized population of 30,000 persons.

<i>Item</i>	<i>Per capita per day</i>	<i>Annual requirement for 30,000 persons (in tonnes)</i>
1. Vegetables/fruits	500 gm	5,000
2. Cereals	100 gm	1,000
3. Tubers	500 gm	5,000
4. Fish/Meat	30 gm	300
5. Milk	200 ml	2,000
6. Fat	40 gm	400
7. Neera	100 ml	1,000

The existing paddy fields will provide 1,000 tonnes of rice per year. The average productivity of

tapioca, yam, banana, jackfruit, bread fruits, etc., can be taken as 20 tonnes per hectare. To produce 10,000 tonnes vegetables and tubers, the village requires only 500 hectares of garden land—at most, 600 hectares.

To provide 200 millilitres of milk per capita per day, daily milk production will have to be about 5,000–6,000 litres. Assuming an excess of 4,000 litres per day for export to the nearby town, the maximum production needs to be 10,000 litres per day. Assuming an average yield of 6–8 litres per day, the village requires 1,500–1,600 animals, milch and dry together. Each animal will require 7–8 tonnes of green and dry fodder per year. The annual requirement will be 12,000–15,000 tonnes per year. At a productivity rate of 60 tonnes per year, about 200–250 hectares of intercrop area will be sufficient to produce this.

12. Those who have a homestead of half an acre or so and want to cultivate for themselves, the following general crop mix has been arrived at:
 - (i) two semi-automatic poly houses of 5 cents each;
 - (ii) food giving trees like jackfruit, breadfruit and mango, 2–3 each;
 - (iii) all fence lines planted with glyricidia to give green biomass and solid biofuel – 1,200–1,500 kilometres of bio-fencing for the entire panchayat producing about 5,000 tonnes of solid biomass and 1,000–1,200 tonnes of green leaves.

The general principle adopted is to capture the maximum possible amount of solar radiation reaching the village and convert it to heat, electricity and biomass. The people of the

panchayat know that solar radiation is the only assured free goods that they can get and that nobody can deny it. The next freely available goods is rainwater, but its availability is becoming more and more erratic. Soil and labour power are in their own hands; they can use it or abuse it.

The panchayat has about 300 hectares of rubber plantation. Rubber is very profitable today, but may not be tomorrow. Exhaustion of petroleum and non-availability of alternative fuels will keep automobiles in sheds, reduce demand for new automobiles and cause a substantial reduction in the demand for natural rubber. This will cause a drastic fall in the prices of rubber. So, after slaughter tapping, the villagers have decided to go for mixed plantation—rubber and food trees with a rubber density more than two-thirds of the present.

As mentioned earlier, the people are quite aware of Mao Tse Tung's quote that 'waste is wealth in the wrong place'. They have learned to convert the last kilogramme of waste to wealth. They have also learned that pigs are very efficient converters of waste into human food. They have a full-fledged veterinary hospital, with doctors and animal husbandry consultants. They have learned to integrate the agricultural department with animal husbandry, dairy and fisheries departments. They have established a central piggery containing twenty breeding pigs, with an annual production of 20 tonnes of cleaned pork per year. For this, they have a sanitary slaughterhouse with a capacity to handle twenty large animals or forty small animals per day.

As far as eggs are concerned, the panchayat has decided that its consumption will be restricted to what can be imported. A small number of birds will be reared in homesteads. No modern poultry farm is envisaged to begin with. Health-wise, coconut oil is one of the best oils. The allegation that it increases cholesterol is baseless—this the villagers know. The annual

requirement is about 400 tonnes of oil for cooking. Currently the annual average yield per coconut tree is forty nuts, which can be easily doubled or tripled. The maximum potential yield is over 300 nuts a year.

One hectare of coconut plantation can yield 2 tonnes of oil. Therefore, 200 hectares of coconut plantation would suffice to meet oil requirements. Another 50–60 hectares will provide all the curry coconut. One tree on an average yields 100–150 litres of Neera, sweet toddy, per year. To produce one million litres of sweet toddy annually we require 7,000–8,000 plants in 40 hectares of land, and 60 hectares of coconut plantation is set apart for tender coconuts—one million nuts per year. In all we require about 600 hectares of coconut plantation for internal consumption. The panchayat has about 800 hectares of coconut plantation, out of which 200 hectares will be cleared and kept apart for tubers, banana, etc. The rest of the area will be replanted with better species of trees.

Industrial Products

Every household uses a variety of industrial products on a daily basis such as toiletries, processed foods, clothes, medicines, utensils, gadgets, stationery, vehicles and so on. To begin with, the panchayat has decided that together with the remaining panchayats of the block, all the toiletries, processed foods, readymade garments, and a bulk of the stationery and medicines be can be manufactured locally. For certain commodities the production may be centralized at the district level. As far as possible, all production units will be owned and managed cooperatively—larger units will be owned and managed by smaller units that are their consumers.

A massive education campaign, both inside and outside schools, will be mounted to educate the public to reduce and stop consumption of goods and services that don't have direct welfare value. Alcohols and narcotics will head the list. Also bottled drinks like colas, junk food and price-enhanced (not value added) goods like those marketed by Kellogg's, Maggi and similar companies. Of the tens of thousands of goods displayed in a supermarket, only a few hundreds have any real welfare value. Gradually citizens will learn which ones are useful and which ones are unnecessary.

There is a saying that a beautiful girl does not need ornaments. Similarly, a good commodity does not need any advertisement. Consumers can be almost sure that goods advertised on television, radio and the newspapers have some flaw or another that they want to cover up. The quality may be poor, the claims may be exaggerated, the price you have to pay may be too high or the goods may be positively harmful. It would be safe to decide that advertised goods will not be purchased. Unless we get rid of consumerism, there is no question of sustainability. All advertisements try to convince you that you need something that they produce. Most of those things you don't need.

If the same end uses, for example, quenching thirst, abating hunger, lighting, cooling and travelling can be met with indigenously, the villagers will not go in for foreign or 'Indian foreign' goods but will purchase only locally made goods.

The Swapnabhoomi has built up a high voltage team to

- (i) counter (media) propaganda, and
- (ii) market local products

For the citizens, this is a new freedom struggle against consumerism and outside controls. They reject the concept of

joint stock companies and share markets. Their production and marketing firms are owned by the public. Their shares are not for sale in the open market. They know that the share market is simply a gambling den and the capital in it is not a part of the production process. They also know that the mega players of their own country—the Ambanis, Jindals, Vedanta, Wipro and the Tatas—are part of this global gambling racket and suck the life blood out of smaller players and ordinary people. The villagers also know that their attempts to liberate themselves from this spider's web are made difficult by their own national governments. However, they also know, that even within the limitations imposed by their own national governments, there are still many battlegrounds on which they can fight these national and global forces, starting by freeing themselves of the greed within.

And this is what they have succeeded to do. They initiated an all out swadeshi and boycott campaign. The boycott began with things that are obviously not needed, without which their quality of life increased. They extended the range of products that they boycotted gradually until it included all those that were produced or marketed by companies whose shares were listed in the national and global share market. These products were replaced by those that are produced locally, that is, in their own panchayat, block, district or state. These producers are basically cooperatives of producers, consumers and marketers.

Health

Earlier the panchayat had about 2,500 private cars and 60 taxis. They have introduced a shared taxi service for emergency travels. Normally all the villagers travel to work on foot or by cycle. They have created safe and clean footpaths and cycle

paths for children to go to their schools. Kitchen gardening has become a local hobby. The garden grows food and not grass or flowers. Their home wastes are composted and fed back to the garden. Through such physical exercises, nutritious food, smoke-free kitchen, litter-free roads and clean water, the health status of the panchayat has gone up. Anaemia amongst women has almost disappeared, birth weight of children has increased, malnutrition and obesity has been banished (together with junk food). And above all, villagers' leisure has increased and their participation in cultural activities has gone up. Nobody sells narcotics or gutkhas, nobody consumes alcohol, there are no drunken brawls and women are safe anywhere and anytime. All their children have become brothers and sisters of all the children in the world through cyber connectivity and the English language.

Yes, Swapnabhoomi has become a 'paradise on earth'.

Today the ecological footprint of the village is around three. By adopting the measures suggested earlier, this can be brought down to less than one, with increased population and a better quality of life. The future of humanity will depend upon whether we understand the implication of the present mode of life and if we are ready to change it. There are no physical obstacles to change. The blocks are mental. Hopefully these blocks will be removed before it is too late. We need to start today because tomorrow will be too late.

Dreams: The Elixir

One of the first attempts in early chemistry involved the search for an elixir that could keep one young forever. There is nothing that can prevent aging, at least to date, but one can remain mentally and intellectually young: through curiosity and dreams. Some of my friends—I think it was Vinod Raina who used the term first—called me an ‘incorrigible optimist’. It has been for me a conscious decision. I like to believe that whatever will happen, will be for the best or *jo bhi hoga, achha hoga*. The trick is to enjoy the present. There are a thousand and one things I am curious about. If I start writing down all my intellectual preoccupations, it will be a very long list. But I will mention a few of my dreams here. I dream of a:

- A world without borders
- A world without conflicts and wars
- A world without deprivation
- A world becoming increasingly human
- A world with better health and life expectancy
- A world where everyone is emancipated from alienation
- A world which bequeaths to the future generation a better world
- A world satisfying the meta needs of human
- A world without waste
- A world for which the entire universe is there to explore and know

- A world of infinite challenges

For Kerala I dream of:

- All-solar homes, with biogas, solar water heaters and SPV electricity, supported by biomass gasifiers—using solar energy via three routes—photosynthetic, photoelectric and direct heat.
- A clean litter-free state, where every waste is converted into wealth.
- A state free of flies and mosquitoes.
- A state that extracts everything it requires from the soil and the sea, using only solar energy.
- A state that is a paradise for children, where adults have to work only less than four hours a day to produce everything to provide them a high physical quality of life and enough leisure for a high spiritual quality of life.
- A state that is a horizontally interconnected network of increasingly self-reliant and self-sufficient local societies, where control of our life is in our own hands and not in the hands of unknown speculators and mafia dons.
- A state where education is a festival, with children enjoying learning, loving and respecting teachers, who find pleasure in the company of children and help them to learn.
- A state where caste and creed have become irrelevant—like in my own home, where different castes, religions and languages coexist.
- A state where the bulk of the travel is done by one's own choice and is not dictated by the necessity of earning a livelihood.
- A state of Marx's, Tagore's and Gandhi's dream.

To work for such a Kerala is a joy and that joy is the elixir of life. True, this elixir will not prevent biological aging. At the age of eighty, after a ten-year-old heart bypass, one is forced to readjust one's physical pace. I travel much less nowadays. The corollary of this is that I am at home longer, to the consternation of my wife. The kitchen has been my experimental lab from early childhood and it is the same even now. I invade the kitchen more and more, and my wife tries fiercely to protect her territory. Every day, we have altercations and that acts as an emotional elixir of my life. But I am causing unpleasantness to my friends in the KSSP too. I now have more time to conjure up several more activities and harangue them with suggestions, requests, projects and protests. But, luckily, they have learned to deal with it.

Appendix I

Lau Kin Chi is a professor at the Lingnan University, Hong Kong and has been the dynamo of the ARENA, a fellowship collective of seventy to eighty activist-academicians hailing mostly from South and South-East Asian countries. I have been an active fellow of ARENA for a few years and have had the opportunity to befriend a large number of the other fellows as well as visit China, Hong Kong, South Korea, Sri Lanka, Malaysia and Japan.

Lau Kin Chi (KC) interviewed me in August 2000, while she was visiting Kerala. The subject matter was mainly the People's Plan Campaign.

KC: I already have a picture of the kind of planning that has been going on. So, I'd like to explore a bit more the kind of problems that are there. For instance, when the panchayat members were elected five years ago, they were not aware that they would have all this power, this money and this authority with them. It was only after they were elected that they were suddenly faced with the people's planning process. The question is, with the panchayat election of 2000, most people know that there will be all this power and authority involved. So, would that somehow also generate a whole series of party politics, fight for the positions? Because they are now positions of power. I think this question is important, because it's also the question that we always face, that is, would the people in power still be very much organically linked to the people they

represent or will they develop into bureaucrats? How would you see this question?

MP: As you said, when these people were elected in 1995, they never had any indication that they would be asked to take on this much load. And many of them today feel—‘Next time I’m not standing for election. I can’t take this much load. I will do my bit of service in a small area, in my small capacity.’ So, out of the 15,000 people’s representatives, maybe 15 per cent will automatically withdraw because they are not ready to spend this much time and effort. But they are essentially good people. They will do their job in a smaller capacity.

But this danger is there, that is very clear. With so much money, so much power, the desire for money and power may trigger a horse-trading system where political parties and individuals may start a ‘I-should-be-the-candidate’ move. We have this fear and for the past two years, we are concerned about this problem. I have been trying to impress upon some of the people that such a thing can happen, and there should be a mechanism by which power mongers, power-hungry people can be kept out, while people who are genuinely interested in the development of the society can be attracted. But there was no specific programme carried out by any political party.

I have been enquiring from my friends in the planning board what the possibilities are. Will the next panchayat or the next set of people be more of what you call selfishly-motivated people or socially-motivated people? Their feeling is that if power-hungry people or bad elements are fielded by the political parties, they may not be elected. If there are two or three political parties and if one of them fields a very good person known by the people, while the others may be party leaders but are corrupt or power-hungry, then there is a chance that the good person may be elected. People may look not

only at the political affiliation of the candidate. Then there's a good chance that political parties may field better candidates than what they fielded last time. Which means, in the next panchayat elections, there is a likelihood of more sincere people coming in. This is their opinion.

But partly that may be wishful thinking. My own feeling is that, after the panchayat elections, out of 15,000 people, 3,000 or 4,000 people were 'zero'—in the sense that they neither contributed nor were they ready to contribute, or they were not able to contribute. That is, at least one-third were nominal members. Next time, nominal members will be much less. There will be many more active members. Now, active members could be both types—people who are for the society or active members who are for themselves. The selfish and the socially committed. But both will be capable. So the capability level of the next panchayat will be much higher than the present panchayat because they know that without that capability they cannot survive.

So who will predominate—the selfish-minded people or the social-minded people? I think it will be on an even keel. The selfish people cannot dominate. But that doesn't mean that political parties will succeed in leaving them out and putting in only the better people. But still I feel it will be a ratio of 60:40. This is not based on any survey, it's a sort of gut feeling—60 per cent will be more sincere, able people and 40 per cent will be what you call—I don't know what to call them—the selfish people. One thing is that the selfish people are going to be everywhere, at all levels. This type of power-hungry, money-hungry, corrupt people will be everywhere. But this panchayat system now offers a possibility for ordinary citizens to keep a check on them. Today, the panchayats have not learnt. The gram sabha has a lot of powers, but it is not exercising even 1 per cent of its powers. The gram sabha assembles only to

argue and decide on what you can call beneficiaries and that sort of thing. So, they are not yet active as custodians of the panchayats. And major effort will have to be put in to make the citizens take power into their own hands, the power that is beyond any enactment. So, in this sense, the next generation panchayats will be much more effective.

KC: I think the People's Planning Campaign is a major step to involve the ordinary people, but a lot will depend on the quality and capacity of the people. So, the question is, in these last four years, what would you see as some of the major gains and shortcomings, especially in the cultural dimension? I think it is a key factor for the concept of people's planning to work. This would involve a lot of changes in our habitual ways of work style and ways of life and it also offers an opportunity to challenge the hierarchy.

MP: These last four years have been years of churning—a lot of turbulence; there are no streamlines yet visible. People see more corruption, not because there is more corruption but because it is more visible. Some people feel there is more corruption today than earlier. But gradually they are realizing that it is not because there is more corruption today but because now they are able to see it. As for their own attitudinal changes, it is not yet very clear.

I have not seen systemic attitudinal change for a whole society coming in. It has not yet taken place. It has to take place in, maybe, the next five years. But so far, it has not taken place. In the sense that, suppose there is a going back, suppose there is a new party coming to power in the state and that party wants to go back on these things, the reaction from the people will not be that strong. This is partly because though the state

planning board, the state government, all of them have done quite a lot to train people, to take up these activities, there is one important element which they have overlooked. They should have simultaneously done what you could call a sort of citizens' education programme. Educating the citizen for democracy. Which means it's not only obeying the government but also questioning the government. It is a major programme—by the government to question the government—which the state planning board could never have undertaken. At the KSSP, we tried in our own limited way, but there are limitations too. The KSSP is still pursuing the idea of citizens' education and if this happens, then gradually there will be a new way to look at things.

When I say that this is still chaotic, one can say that out of the 1,000 panchayats, 10–15 per cent are excited and feel that they are doing something great, a feeling of achievement. That may help them to transform themselves to a new level. But we need another major campaign, a major empowerment of citizens as individual citizens, not as subjects but as sovereign actors. In a democracy, the citizen is sovereign. That can be made real in the gram sabha where each citizen has a voice. That will take some time, but hopefully it can be done.

KC: In that sense, the people's planning project, if you can call it a project, is not so much an economic one to take on local projects like irrigation, but a major cultural project? Thus it will have more sustained effects for transformation.

MP: You are correct in that sense. The overall criticism is that the cultural aspect of the project has been overlooked. Much more importance has been given to what you call the material aspects of the project. There was only very little input in the

cultural aspect, which means attitudinal changes and things like that. But now gradually people are realizing it. And they are realizing it because the bureaucracy is taking the control. It has become stronger. The bureaucracy has learned how to make use of the new situation. But we have not built up any counter-force to bureaucracy. So more people have started feeling that we should build people's capability to control the bureaucracy also. I mean that capability has to be there not only to plan your resources, plan development but also to govern. So hopefully, there will be some additional input in the cultural aspect of strengthening the planning.

KC: Have there been any dynamic debates on these issues in these few years, or is it because it is such a huge project and people are too involved in the everyday running of the project?

MP: There are two levels of debate on the cultural aspect. One is what you call a political one, in the sense of painting the image black, saying that the whole thing is very bad. This is an outright rejection of the whole process, saying that corruption has been decentralized, and nothing has been done, that the panchayat representatives are not as efficient as the government departments, etc. That will be a sort of negation of the entire thing. Then there is a counter one, romanticizing that everything is much better. But the importance of the cultural aspect of people's planning has not been debated.

KC: How has this process, with all the mobilization of people and expression of people's need, impacted on the parties, say the CPI(M)? Some of the left parties have been claiming to be articulating people's needs and desires, but on the other hand the structure within the leftist parties has been also generally hierarchical.

MP: First, the hierarchical structure of the political parties. That hierarchy, especially of the left parties, has hindered them from actively participating. So, one cannot say that they have made use of this as an effective tool for articulating the needs of the poorer supporters or the most downtrodden. They have not made this a tool for class struggle. And so, what happens is that people will not be judging parties by the way they look. People will be judging the local party leader, whether she/he is from the Congress Party or the CPI(M), as to how they have behaved. People will not decide totally on party loyalty, but will look into the performance of the local party. I wouldn't say that political parties have understood the possibility of this people's planning campaign for political purposes, except perhaps the Muslim League. They know that if they do it well, people will understand it and they'll get the credit. So what they have done is, for all the training, they have sent their best people, and their best people can work with both the left and the KSSP. And most of the training is handled by the KSSP activists. So the Muslim League will say okay, we may fight you on other things but here we are with you. That is what the top leadership of the Muslim League says. The top leadership of no other party has said that.

KC: So the top leadership of the Muslim League have understood the importance of having its members actively involved in the local processes?

MP: Yes, the top leadership of the Muslim league has spent time on planning how their rank and file should act on this. No other party's top leadership has done that systematic planning. The CPI(M) is a big party, so it can give a sort of a wholesale support, but its leadership has not spent 'leadership days' on planning it. The Congress message has been: 'Disrupt it.

Destroy the process.’ But within the Congress, there are people at the ground level who know the importance and are very friendly with all of us.

KC: In this local government, the people express their need for micro-projects and needs very immediate to their everyday lives. But on the other hand, at the national and macro levels, there is the WTO, liberalization, privatization of insurance, cutting down on welfare, etc. How would these local micro-projects be contextualized in the global and macro developments which are basically encroachments on people’s rights and livelihood, which work to exert more control over the people and over local resources?

MP: See, all the political parties believe that global forces are to be resisted at the national level only. These local-level things cannot have any impact on the global one. The fight against globalization, the fight against liberalization, for example, the import of edible oils and fall in prices of local edible oils, all have to be done at the national level. So, they find a dichotomy between the global and the local. And at the local level what they expect is only a sort of a minor amelioration of poverty. They don’t have a theoretical understanding. The global forces will not be affected by this. But the KSSP particularly holds a different view, that these global forces can be resisted through local resistance. Local resistance, what you call the micro-enterprises, micro-credit, small production units, small service units, many of these things. Right now they constitute only 0.001 per cent of the total economy, so insignificant. A debate is taking place in the KSSP. The KSSP is converging to a viewpoint that local resistance can be built up and local economy can be strengthened in such a way that in the long run the global forces will feel the pinch of it. Their market,

the local market, can be attacked. We can capture the local market at least partially. But this is a long fight and we have to prepare for such a fight. The theoretical understanding for such a fight and the practical preparation for such a fight are what right now many of us are involved in. But it's yet sort of in a preliminary stage.

KC: Does it mean in the practical preparation the people's local government and local economy must both be strengthened?

MP: Yes. In this, the government's policies and our policies are the same, that both the local government and people's participation should be strengthened. But the difference is that for the government it's only a sort of act of charity; for us it's an act of resistance.

KC: At the theoretical level, is this a question of how to confront and deal with the new global development and seek alternatives?

MP: Yes. But they feel that the whole thing is like a tsunami, you just can't do anything. The left parties say that the Chinese way is the one of alternatives, but they don't really know what the Chinese way is or what the Chinese are now doing.

Many people won't agree with us. People will say you are just romantic utopians. Our own feeling is that so long as the societies subscribe to the value of becoming American, this will collapse. There we feel that some of the Gandhian values have to be brought in. One has to have the wisdom to differentiate need from greed. Which means one should have a new attitude and approach towards the concept of human progress, a philosophical understanding. So the whole thing has to be a philosophical one also. But there is difficulty for

both Marxists and non-Marxists to accept that. Both Marxists and non-Marxists concede that unlimited development is not possible. But they shun putting any limits to development. They shun putting any limit to the rate at which we can exploit natural resources. They say science and technology will always be there to solve the problems, whether it's global warming, absence of natural resources or disruption of the ozone layer. It's shared by both capitalists and Marxists and that prevents them from asking such questions.

So they find it difficult to think about an alternative model for progress. But throughout the world, we see people choosing new alternatives. Even in the US, thousands of groups are thinking of alternatives. And these alternatives are a lot similar to ours, that there are limits to natural resources. One need not use so much of the natural resources that they stop human progress. Then, it depends on what you mean by human progress. Is it one car for everybody, one fridge for everybody? Is it counted in material terms or human terms? Is it achieved in GNP terms or in cultural terms? It's a challenge to us, how to make small powerful as well as beautiful. But how can small become powerful? There are two ways of making small powerful. With the existing technology, there is a solution which is a workable one: [have a] higher rate of production than what it is happening, and make things very cheap. R&D initiative can turn the production of one million tonnes into ten million tonnes. The whole R&D direction has to change with the aim of making small powerful. However, all over the world, institutions, their R&D, strive to make large powerful.

For me, a stable situation is what I would term solar democracy or solar communism or solar socialism. For me socialism, communism and democracy at that stage are identical. Our only source of energy is the sun. Using that source of energy is only one more step forward. It's not difficult. Minimum

amount of input is required but the big oil, coal industries are blocking it. Many of my friends say that by 2010 solar energy will rule the world. The effort to make solar energy cheap will drastically change the power situation. So energy becomes the key. At one stage, we were just spending all our money on imports or sending people to the moon. Even 10 per cent of that effort is enough to find out how we can get solar energy. Suppose the solar energy we extract is sufficient to extract all metals and non-metals we want from extremely diluted sources like soil and sea water with the knowledge we have, then there's no resource shortage, whereas steel will not last, oil will not last. Hopefully, gradually, in our small way, we can contribute. Tomorrow or day after tomorrow, this is possible. Then whatever things we want, we can make them locally. Energy is there, technology is there. Your transportation needs will come down. This is sort of a dream. But theoretically, it is possible, though it is still utopian. The question is whether we increase our ability to compete in the present game or change the game. Some of us think that we are not going to compete in the present game itself, but to change the game to make it one in which everybody present can take part.

KC: Dreams are free, and so we should be dreaming. I think that there are several questions that we could go further into. One is related to your personal vision and the other is what is it that sustains your movement.

MP: In 1962–65, I was in Moscow and I have seen what it is and I found a different vision about human progress. If your vision is only to be just like America, it means more and more consumer goods and consumption. This was the main vision of Marxists. I don't think the Marxists' vision of progress was different from capitalist visions, though capitalism assures

it to the rich only, but socialism or communism assures it for everybody. And so, mass consumption is in communism: the productive forces become so developed that there is an abundance of everything so that anybody can have anything—this was the interpretation given by mainstream Marxists. This was not Marx's vision.

What is human progress? Essentially, it is keeping good health, physical and mental health. It is continuously enriching ourselves culturally, with our cultural entity. To keep physical health, you don't require all these things. You require much less material goods than what people today aspire to. Our expectation is that we require only less than 10 per cent of America's current use of resources. I hope future society will be one which will be wise enough to understand this and say that I can be happy if (a) I am healthy and (b) I have unlimited opportunity for my cultural development. Cultural development does not require so many resources. It's also important that I participate in economic activities. Participation in economic activities is a cultural necessity. That cultural necessity will produce enough material to keep you healthy. Increasing degree of economic participation means decreasing economic inequities. The children will understand. Everybody should get enough income. The division between rich and poor should become lesser. This is what we call 'science for social revolution', the reversal of the tendency of enrichment and impoverishment. This is what we call revolution. How can we assure more and more control over natural resources, not by a few, but by each and every individual citizen? [Through] political participation. And you cannot participate in politics unless you know how. So people have to be word literate, technology literate, science literate, politics literate. So it is not only monetary reforms but intellectual reforms. Both these are achievable theoretically.

Actually, we don't know whether they are achievable or not. But once we decide that we want to achieve [them] we are ready to work for [them]. I tell you, this earth can become a paradise. You decide whether you want it or not. I intensely want it to happen—a sort of emotional optimism. When I start working for it, that requires functional optimism and theoretical optimism that it's possible. My emotional optimism is sustained because more and more people begin to share it and so my own circle of friendship enlarges. The more friends I have, it sustains my optimism. That you are here, all of you are here strengthens my optimism. That is sustained optimism. So you go on attempting it and ultimately you will succeed. We are not bothered about whether you succeed in the first attempt or the second attempt.

KC: I'm not sure if we have many MPs with your kind of optimism. Is there something in your family or in your life before going to Soviet Union, in your formative years, something that makes a certain personality, to become someone like you?

MP: See, in my family background, there is nothing special to point out that one can become like this. I come from an average family. My father was an average physician. And I am the eldest of seven children. So of course I had some responsibility to help out my father to bring up the family. But my mother was an exceptionally good person. And according to her, tomorrow will be better.

KC: That means there is optimism?

MP: There is optimism. She had grown much more rapidly than my father. We come from an orthodox high-caste

community. Highest caste community, which used to keep some people at a distance so as not to become impure. My father was a scholar of the Vedas. My mother too in my early childhood was orthodox. But by the time I was older, she was ready to wash the dishes [in which] the lowest caste had eaten. And that is a great value. At that time you know, many other people, even our servants, used to refuse because servants come from the middle caste. We from the highest caste, servants from the middle caste, and there are people called the scheduled caste or lower caste, untouchables. Some of my friends are untouchables. They come and eat whatever is there, that is the sort of broadmindedness that I have partly imbibed from my mother. Basically, success brings success. I have been luckily successful in what you can call getting friends and more friends. And the poor are also very optimistic. So you know, one optimist plus another optimist makes three optimists and not two optimists because each is strengthening the other. I suppose that could be the best answer [as to] how I am able to sustain this. Otherwise there is nothing. For me the concept of progress is not that I own a foreign car, a big house, that gadget, this gadget. There is no limit to that. An exponential curve has no limit. It just goes up. So I have been able to make it a sort of an asymptotic curve. That is good enough for me. So the personal expenditure of my family, at constant value, might not have increased more than 20 per cent from the early years. For many others the expenditure must have increased several folds.

Appendix II

Shoma Choudhary, a PhD student, wrote her thesis on the KSSP. She lived in a KSSP activist's home in Kannur district, learned Malayalam and read the documents of the KSSP in original. She also interviewed a few people, including me. This interview did not take place face-to-face, but through a questionnaire. I am reproducing it here.

1. How do you describe the Parishad?

The KSSP is generally referred to as a People's Science Movement.

2. Is it a voluntary organization/an NGO/a cooperative society like the Sahitya Pravartaka Sahakarana Sangham?

By and large it is a voluntary organization. It is not a cooperative society. In a generic sense, it is an NGO—a non-governmental organization, but different from what people understand by the word NGO. In the early eighties, this question was raised within the organization: What are we? The question was answered in a number of negatives—what the KSSP is not.

What the KSSP is not:

- KSSP is not a political party. But many of the activities of the KSSP may be welcomed by all political parties to a greater or lesser extent. However, our aim is not 'to become acceptable to political parties'.

- The KSSP is not a mere developmental organization. Yes, it is working in the field of health care, education, low-cost housing, income generating activities, etc. But that does not constitute the sole objective of the Parishad.
- The KSSP is not a cultural organization. It organizes *kalajathas*, competitions, exhibitions, etc. But its objective is not mere culture.
- The KSSP is not a mere educational organization. It helps children, teachers and citizens to learn, conducts talent tests and other competition, organizes science clubs, etc. Yes, it is involved in both formal and informal education. But its objectives are not limited to education.
- The KSSP is not a mere research organization. It carried out studies and conducted research on many problems, such as ‘problems of Kuttanad’, ‘appropriate technology’, ‘wealth of Kerala’, ‘environment protection’, etc. But its objective is not limited to R&D.
- The KSSP is not merely a science popularization organization.
- It is not merely a rural development organization.
- It is not merely a publication firm.
- It is not just a rationalist outfit...

The KSSP is all these things together and more. Its guiding slogan is ‘science for social revolution’.

Those who do not reply to letters, who do not keep proper accounts, who do not carry out committed responsibilities, who try to wriggle out of responsibilities, who do not value the time of others, who instead of creative criticism indulge in complaints and speaking ill of others, who do not have faith in human beings—such persons cannot become good Parishad activist.

3. *What is the difference between an organization and a movement? Do you think one impedes the other or facilitates the other? What are the tensions between [them]?*

A movement, as the very term suggests, is dynamic. It moves, it changes. Its ideas grow and change, its activities change, its scope changes, it grows both geographically and numerically. While keeping certain cardinal features so that it is recognizable, considerable changes take place. An organization is what the body is to life. It facilitates and maintains the movement.

At some stage or the other, there would be tension between a movement and its own organizational structure, between body and mind, akin to that between productive forces (movement) and production relations (organization). This has invariably happened to political parties, class movements, cultural movements, etc. Those movements which fail to transform organizational structures as it develops, petrify or putrefy.

4. *Who does the Parishad take inspiration from (similar attempts in other parts of the world or India)? Can you think of similar initiatives in China, Russia or the US?*

The Parishad cannot claim to have taken inspiration from any organization in India or abroad. However, one can say that in the sixties, the books and ideas of J.D. Bernal had profound influence on the leading activists of the KSSP. We are not aware of any movement outside India even distantly similar to the KSSP. However, the KSSP has found a number of organizations with which it can resonate: like the now defunct 'Science for the People' group in the US, the very active ARENA group in Hong Kong, the PP21 group in Tokyo, etc.

5. *How are issues in the Parishad taken up? How do they receive prominence at any given point of time? Why did education become*

important in the seventies and health in the eighties or people's planning in the nineties? Is it a question of change in the leadership, which brings about a change in the emphasis and orientation? Or is it debates outside in civil society or even in the international arena that bring about a change in the Parishad's orientation?

Debates outside (national, regional or even international), interest and persistence of leaders, response from the various constituencies to the first level of intervention—all are causes for issues being taken up by the KSSP. Since, from the very beginning, teachers, both in schools and colleges, formed the backbone of the KSSP, education has always been a subject of interest. Occasional intensification of activities come about as responses to changes in government policies or certain incidents. Many discussions burst out when the external environment becomes favourable. The KSSP has been, in a way, preparing for the People's Plan Campaign since 1976—the publication of the *Wealth of Kerala*.

6. What was the emphasis in PTB's time and in his work? What was characteristic about his style of functioning?

Before PTB, the KSSP was almost a professional organization of 'Science Writers in Malayalam'. It was PTB who transformed it into a 'science movement for people'. His characteristic style of functioning was quick decision, quick action and large volumes—more emphasis on breadth than on depth.

7. What is the difference between your style of functioning and his style (work, goals, orientation, vision of society)? Is it a difference in ideologies and vision?

My style? It is difficult for me to say. Obviously there was a difference in vision. Though we both shared Marxist ideology,

my three years experience in the USSR had prompted me to raise questions and ultimately come to the conclusion that it was necessary to develop a new ideology, which so to speak synthesizes Marxian thoughts and Gandhian thoughts, both changed appropriately to suit the conditions and knowledge available in the twenty-first century.

8. *In the People's Science Movement, who are the people that you seek to represent (name some categories or groups)? Why do they need to be represented? Is it because they are incapable of representing themselves?*

The PSM cannot claim to 'represent' any group of people—but it recognized two broad groups: a majority which was getting continuously impoverished or facing the threat of impoverishment against a minority which was being continuously enriched at the expense of the minority. The PSM is consciously partisan towards the majority and is against the minority when their interests clash with those of the majority. Its members come mostly from the so-called middle class and intellectuals.

9. *What according to you have been the major turning points in the development of the Parishad (shifts in the orientation of the Parishad)?*

There are several milestones—1967: when a constitution was adopted and district/local units were formed; 1972–73: formation [of] school science clubs—mass campaign on Nature, Science and Society—from an exclusive group to an expansive group; 1974–76: energy debate and development of Kerala, formation of Rural Science Forums; 1978–80:

kalajatha; 1988–89: Literacy Campaign—sudden change in the character; 1991–96: Resource Mapping—planning campaign.

10. *In these years of its existence what have been the major changes within the organization?*

The major change as far as I can see: emphasis shifting from quality to numbers, from scientific critique to political critique.

ON SCIENCE

1. *What is the difference between people's knowledge and people's science? Is there a difference? E.g., agriculture, medical notions among the people, architecture (Tachhu Sastra), indigenous skills and techniques? Mathematics?*

In the KSSP, we use knowledge, science and technology synonymously. Actually there is a difference, but our emphasis is not on that: We don't use *people's* as an adjective to [describe] science, but to [describe] 'science movement'. Basically science, scientific method is same for all and everywhere. People's knowledge, indigenous skills, techniques, all are as it is, discrete. They have not been developed into being capable of predicting new things. [They are] mostly a product and not a tool.

2. *Is Ayurveda a science? What are the differences between the ideas of health that the Parishad seeks to disseminate and the notions of health in Ayurveda?*

Ayurveda, according to me, was a science, but not today. The language of Ayurveda is quite different from that of modern science and is not really understood by anybody. It is used rather mechanically. As far as the 'notion of health' is concerned, there is not much divergence. But there is much difference in

the notion about 'disease'. What the KSSP wants is to achieve a convergence in the notion of disease too.

3. *What is the difference between sasthan and vighan? Do you find any difference in the usage or what it connotes?*

In Malayalam, we use *sasthan* and *vighan* absolutely synonymously. In fact, we use *sasthan* in place of *vighan* in Hindi (*vighnan* in Sanskrit too means the same—but *sasthan* is different in Sanskrit).

4. *Why is science delinked from technology in your argument? If knowledge is linked to practice, then isn't scientific knowledge the basis of technology? Then why this separation here? Doesn't knowledge guide the practice even in the case of science?*

Science is not de-linked. When the KSSP uses the word science, it includes technology too. This has led to some confusion because quite often the KSSP's critiques are applicable only to technology and not to science. When it speaks of 'abuse of science', it really means abuse of technology. In a deeper analysis, when pursuit of science is split into its three components: posing the question, seeking the answer and using the result, the criticisms coincide. The rich pose questions, they use the results too.

5. *Were there any debates within the Communist Party of Kerala on science? On the science policy of India? What was their position? How is the Parishad's position different?*

No serious open debate except in the case of ecology. Many in the CPI(M) and the CPI argued that ecology is an imperialist science, designed to block the development of developing countries.

On The Campaigns: ‘Nature, Science and Society’ (1973, 1976), ‘Keralathinde Sampath’ (1976), ‘The World We Live In’ (1985).

1. Who wrote it? When? Is the time of these classes significant?

The first set of notes on ‘Nature, Science and Society’ were written by me and P. Govinda Pillai. That was in 1972. The intention was to spread an objective and scientific view of the universe around us and also about human history. There was no temporal significance except in the set of classes taken in January 1976, the period of Emergency when this provided an occasion for a number of progressive thinkers.

2. What does it say (essence)?

The contents of ‘Nature, Science and Society’ as well as of ‘The World We Live In’ were almost identical. They were, in fact, quite voluminous, requiring more than a year to teach. What was attempted was only to give a glimpse. They dealt with:

- (i) The non-living universe from subatomic particles to the infinite universe. Emphasis was given to unceasing motion or change.
- (ii) The inseparability of the notion of both space and time from matter in motion, thus leading to the absurdity or internal contradiction of the question ‘When was the universe created?’ It intellectually confuses the listeners: the universe could not be created. It was always there, it could only change. Then, what about ‘The Creator’, the ‘God’? We leave it to them to seek the answer themselves.

- (iii) Origin of life, evolution, descent (ascent) of man, the nature of human consciousness and its inseparability from human body or brain, human physiology.
- (iv) History of human societies, from primitive tribes to modern nation, changing relationships between humans and nature on the one side and amongst humans on the other side.
- (v) The current situation: more and more people chasing dwindling resources; but there are limits to growth; there are possibilities of growthless development, instead of growth without development. The end question: What do we want to create, heaven or hell?

The classes on the *Wealth of Kerala* were addressed to more concrete issues and were followed by classes on agriculture in Kerala, consumer protection, energy and development, forest protection, etc. All those were attempts to understand collectively the already visible stagnation/distortion in the Kerala economy.

3. *Why is it important to know the development and interrelation between the three?*

The first set of classes tried to convince that we alone could save ourselves. The second series tried to explore how we could save ourselves.

4. *How was it conveyed to the people in Kerala (made contextually relevant)?*

Basically, [it was] conveyed in oral (lectures) and written (books) forms: Context always existed. It was easy to contextualize.

5. 'Keralathinte Sampathu'—*Is it a Malayalam version of the Kerala Model of Development (Since both were written at the same time!)? Is it the result of the study undertaken by the editors?*

‘Keralathinte Sampathu’ has nothing, absolutely nothing, to do with the so-called ‘Kerala Model’. That term had not yet become popular at that time. It was the product of interaction amongst the KSSP activists and friends from the state planning board and the Centre for Development Studies. Only published information is used. However, we had incorporated into it a different philosophy of development.

6. *What is the underlying notion of history in ‘The World We Live In’? How is it linked to Kerala’s history?*

‘The World We Live In’ was an attempt to understand the human social evolution in relation to massive increase in the understanding of, and the ability to transform nature, i.e., with [the] growth of science and technology. It was also an attempt to understand the saying ‘Humans make their own history’. Gordon Childe’s famous book, *Man Makes Himself*, has been a great inspiration. The Club of Rome’s report, *Limits to Growth*, too had a profound influence on us. There was no attempt to relate Kerala’s history to any of these.

7. *There have been attempts to popularize science even before Independence in the attempts of Henry Derozio, etc. What is the difference in the KSSP’s attempts to popularize science today?*

Frankly, I am not aware of Henry Derozio—even up to this day. There were many writers who wrote popular science. But those were not organized efforts with a vision of a changed society. In the first few years, from 1962 to 1967, the KSSP too was interested only in broadcasting science, in informing people. Soon, the KSSP began to view its own efforts as something not only to understand but also to transform—both nature and humans.

8. *Popularization implies a top-down process of [a] one-way flow. Is there some way in which their science/knowledge is incorporated in any of the Parishad's programmes? Why do you not recognize people's knowledge as people's science?*

Frankly, it has been even till now a process of 'radiation' or broadcast. I won't like to call it a top-down process, albeit from multiple points. Bits of knowledge available with people have been absorbed into the KSSP's knowledge store, but not incorporated into its scientific thinking. There was something comprehensive in people's lives: but not anymore. Whatever remains of that holistic outlook and practice amongst tribals, and probably fisherfolk too, has already become distorted by the 'modern market'. We frankly don't know how to retrieve ancient knowledge and integrate it [with] 'modern science'. We don't think that it is feasible to build up a parallel science system built upon ancient axioms or categories.

ON EDUCATION

1. *The most continuous and sustained interventions of the Parishad have been in the field of education, both within and outside. Why do you think education is an important entry point in society?*

Education is the most massive social activity. It involves almost every citizen—as parents, as students, as teachers or as society. It has the highest potential, both for evil and for good. Its impact is visible/felt only after a long time. Mistakes can be quite costly. Finally, teachers predominate both leadership and rank and file of the KSSP.

2. *The Parishad literature talks about a crisis in the field of education—is it a crisis of development or science or culture?*

The crisis in education emanates basically from the crisis in culture, which is blind to the crisis in development. Both capitalism and socialism extol the virtue of 'abundance'. A communist society, as seen by its twentieth-century protagonists, [was] based on an unprecedented abundance of goods and services. It envisage[d] a state of abundance that [could] be achieved through state ownership of the means of production and a cooperative process of production. It failed. Capitalism argued for private ownership of the means of production and unrestricted competition. Presently, it is victorious. Capitalism has no faith in society. It relies on individuals and their ability to compete in the market. It does not yet recognize any limitations to growth—no resource constraints, no ecological constraints. But such constraints are there. This led to a development crisis. Education for a type of development which itself is in crisis is bound to face the same crisis.

3. Why is there such a premium on education in Kerala?

People believe in individual salvation or escape and believe that education is the vehicle for escape.

4. How has the nature of education been institutionalized? What is the nature of contestation in this sector?

Education is becoming increasingly commercialized on the one hand and communalized on the other hand. Communalization becomes a tool for strengthening commercialization on the one hand and fragmentation of politics on the other hand. A Supreme Court judgment and its unwarranted stretching by successive state governments made 'teacher appointment' a lucrative business at the expense of the public exchequer. Concomitant to this was the continuous alienation of the

teaching-learning process from teachers. Thus, the main areas of contestation became:

- (i) Private education at public expense.
- (ii) Abuse of minority rights.
- (iii) Deterioration of teaching-learning standards.
- (iv) Emergent anti-social value system.

5. Who are the various players in the field of education?

The various players in the field of education are:

- (i) Teachers through their organizations—to strengthen rights and to weaken obligations.
- (ii) Managers desirous of making money at every possibility.
- (iii) Students who want to study.
- (iv) Students who are politically ambitious and not interested in studies.
- (v) Non-teaching staff.
- (vi) Departmental officials.

None of them—except students who want to study and a minority of teachers who want to teach—is interested in education. This has led to a continuous deterioration in the quality of education.

6. Science Clubs—A programme suggested by the Kothari Committee—what did the Parishad do through it?

Through Science Clubs the KSSP was able to create a constituency—small it may [have been]—for science learning. It also helped to create a market for children's science books and

recruit more and more teachers interested in science teaching to the Parishad.

7. *Vigyanotsav—What did it want to achieve? Can a one-day programme substitute a continuous process?*

The objective was to demonstrate that science, in fact any learning, can be fun. It also gave us the wherewithal, the bricks for building, later, the edifice of activity-based and integrated teaching. It was not conceived as a substitute for classroom teaching. But over the years, it gave all the necessary material for the new curriculum initiated in 1997.

8. *Sasthra Sahavas Camp—What did it want to achieve? Why are some of these programmes not seen today?*

Sasthra Sahavas Camp too served the same purpose. It had one additional objective—to counteract the individualistic values promoted by the society and in the schools and to develop communitarian values. It is living not only with science, but also with others. [The camps] have become less popular today because of the increasingly despondent mood of the society. And, all the more necessary too.

9. *Has the Parishad tried to rewrite textbooks? Along what lines? Has the state government adopted them? Why not?*

Yes. The KSSP has attempted to rewrite textbooks, but in a very small way. They, however, could not be accepted by the state government because education is too sensitive and explosive a subject. However, most of these ideas got reflected in the new textbooks written for the new curriculum.

10. *Was there a programme called Operation Classroom? In what ways did the Parishad participate?*

Operation Classroom was a project initiated by the KSSP. Nobody else was involved in it. The objective was to prepare all textbooks and teacher's handbooks for classes one to seven. More than 1,000 pages of printed material were prepared over a period of two to three years. This was still only less than 30 per cent of the requirement. Those who were involved in this were also involved with the SCERT in the preparation of new textbooks in 1996–97.

11. *Why was the Vidyabhyasa Rekha of 1982 drawn up? (Response to any policy programme or any particular practices in Kerala?)*

The Vidyabhyasa Rekha of 1982 was drawn up not in response to any immediate action or policy of the government, but to satisfy a longstanding felt need of a properly drawn up curriculum for the state.

12. *In the Vidyabhyasa Rekha, is there an alternative organization of school education? Why did it not succeed? Why did people not accept?*

The alternative organization of education was drawn up only to indicate a possibility to initiate discussion. There was no illusion as to the government accepting it. Even a much less radical one introduced in 1997 met with violent, though uncalled for, opposition.

13. *Why is there so much of emphasis on technical education? (Pravritti Unmukha Vidyabhyasam?) Is it different from engineering and medicine, which are coveted by parents in Kerala?*

Pravritti Unmukha Vidyabhyasam is not technical education. It is a mixture of Gandhiji's concept of basic education and the pedagogic concept of 'learning through doing'. It is totally different from engineering or technical education.

The education so far has been limited to its cognitive aspects (degrading into rote learning), neglecting psycho-motor and affective domains. This was an attempt to rectify this deficiency.

14. *What was the necessity of the Vidyabhyas Rekha of 1991? How was it formulated?*

The Vidyabhyasa Rekha 1991 was prepared more to discuss the politics of education and impact of globalization on it. It did not discuss in depth the curriculum or organizational aspects of education.

15. *The Kothari Commission had also proposed the Panchayat School Complex Programme. What is new in it? When and how was it conceived? What are the problems with it? What has been the response to it?*

Most of the recommendations of the Kothari Commission remained in the pages of the report. There was nobody to even try them out. The KSSP tried out the Panchayat School Complex ideas—a derivative of the High School Complex. Being the most massive and highly inertial system, changes in education are hard to effect. We did not succeed much.

16. *And yet the programmes do not seem to push further in questioning the social structure? How is the project of social revolution possible without it?*

Verbal questioning can satisfy one's conscience. Social/structural change is both gradual—attitudinal and cultural—and accelerated (political). Education acts on the cultural sphere—that of slow and accumulated change. The argument for mother tongue as medium of instruction, for a curriculum relevant to the impoverished majority and for an activity-based and life-related pedagogy—all have elements of questioning the

existing social structure. That is why it was violently opposed when attempted to be introduced.

17. *Why is there so much of emphasis given to the child (Balotsavam, Bala Sasthram, Eureka, Vigyanotsavam, Bal Vedi, etc.)? What is the Parishad's notion of the child?*

Children whose childhood is snatched away from them grow up into selfish and psychologically deranged adults. That is a dangerous future. This is one reason. Most parents live for children. So children are the concern of the society too. There is no social revolution without children in it. Further, children are the banner-bearers of everything that is good.

18. *How can social needs and individual aspirations be accommodated or reconciled?*

It is not easy to reconcile social needs and individual aspirations. One important element in this will be the cultural development to distinguish between aspiration (often amounting to greed) and needs. Individual and social *needs* can be reconciled.

19. *There have been private investments in education since the colonial period? What is the difference in the nature of the private investments now? Why does the Parishad oppose private investments in the context when it has become difficult for the government to meet the costs?*

Private investments on education during the colonial period have been, basically, philanthropic ones and not commercial ones. Today, it is purely commercial. The argument that government has no resources is not correct. More efficient utilization of resources already set apart for education will take us a long way forward. In school education, 90 per cent of the problems can be solved if the society, the teachers and

the government decide to do so (at least in Kerala). As far as higher education is concerned, the present policy of infinite expansion is simply crazy. Even the most affluent nations will not do it. Education should be compatible with the future economy—short-term and long-term. It shall not become a lottery business.

20. *What are the problems in the institutionalization of the Parishad's interventions?*

Institutionalization of the Parishad's intervention demands major attitudinal—cultural and political—changes. Conversely, struggles to transform education become struggles for social change also.

ON GRAMA SASTHRA SAMITHIS (GSSs)

1. *Why were the GSSs unsuccessful in being institutionalized despite the scope that they possessed?*

The concept was too ahead of its time. The tasks it set for itself were too big. The KSSP failed to impart optimism to the citizens. It also failed to attract the technical-scientific expertise available in the panchayat—the doctors, engineers, lawyers, etc.

2. *Why did you try to make them separate from the Parishad?*

The idea of making them independent was to help them become locally rooted, more responsive to local situations.

On the Panchayat-Level Resource Mapping: Concept of an Idea

1. *What were the conditions that gave rise to such an idea?*

The concept of the PRM arose from the following:

- (i) Inspiration from the *Resource Atlas of Kerala* brought out by the Centre for Earth Science Studies.
- (ii) The increasing faith in local area planning and the absence of disaggregated local-level data.
- (iii) The proven possibility of popular participation—from the experience of the TLC.
- (iv) Experience of the Vazhayoor survey carried out under the leadership of A.P. Chandran.

2. *Who were involved in the conception and discussion?*

Besides me, the people who were initially involved were Professor M.K. Prasad and Sri Subrata Sinha.

3. *Have such experiments been carried out in any other parts of the country before?*

To the best of my knowledge, such type of an experiment was being contemplated for the first time.

4. *Did Professor Gulati and T.K. Arun carry out a similar exercise earlier in the state?*

No. Absolutely, not.

5. *Why was it conceived as a scientific exercise? What was the vision inherent in it?*

It was a revised attempt to resurrect the central concept of the Grama Sasthra Samithi. The panchayat-level development

planning concept promoted in 1987 did not take off. The vision was the formation of a resource group in each panchayat—knowledgeable, competent and committed.

6. *Who were the partners in such an exercise (institutions and groups) and what was the role expected of each of them?*

The CESS, the IRTC and the gram panchayats were the partners. The IRTC/the KSSP provided the idea, took the responsibility of linking up with the panchayats and the development of non-institutional expertise. The CESS provided the scientific support and the formal responsibility. Panchayats were responsible for all cooperation at the field level.

7. *Where was it tried out first? Who were the people?*

It was carried out first in Kalliassery panchayat of Kannur district. T. Gangadharan was in charge of it.

8. *How did the Parishad come in? What was the role envisaged for the Parishad members in such an exercise? How is it different from the party cadre?*

The Parishad conceived the whole idea and all the time played the leadership role. Some of the party cadre and the KSSP cadre were identical. But this was not done as a party task.

9. *How did the Parishad members react to the proposal? What were the various reactions, misgivings expressed? Was there any resistance (democratic centralism)?*

The question does not arise. It was the KSSP crusading the idea. Opposition came much later—during the PLDP-PPC phase.

10. *How were the areas (panchayat) of intervention selected? What was the method? Why specifically Kalliassery (among all the fifteen panchayats)?*

Factors responsible for the Kalliassery option:

- (i) Availability of the leading and capable KSSP activist T. Gangadharan, then the general secretary of the KSSP and also a member of the gram panchayat.
- (ii) Expected cooperation from the elected representatives and the people.

11. *The Kalliassery experiment marks a consolidation of the Parishad's interventions at the local level. Why did it feel the need to localize its efforts at the community level in the early nineties? Does it have anything to do with globalization?*

The concept of local-level planning arose not in opposition to globalization. It was much earlier. I found that centralized planning neither at the national level nor at the state level has been delivering results. From the late seventies, the idea of local level planning has been gathering strength.

12. *What has been the role of the Parishad after the Left took over the People's Planning Campaign as its agenda?*

The KSSP could provide much of the resource persons required for the PPC as well as development ideas at the local level to the panchayats.

13. *From Panchayat-level Resource Mapping to People's Plan Campaign for the Ninth Plan—does the shift in terminology indicate anything?*

The PRM was conceived, even in the beginning, only as a tool for local-level planning. Even without the PPC, it would

have graduated to comprehensive development planning. The PLDP was conceived and initiated for this purpose. The PPC did the mainstreaming.

14. *What was the difference in the exercise? (Major impact of such a shift? Problems? Criticisms?)*

There was no theoretical difference. But in the hands of wrong or incompetent people even a good instrument can become counter-productive.

15. *What is the meaning of Prasthanam? What is the difference between a campaign and a movement? Why this attempt to transform any experiment into a movement? Does it indicate a character of the left movement in Kerala as such?*

Prasthanam is used as equivalent to a movement. A campaign envisages comparatively shorter-term action for limited objectives, whereas movements have larger perspectives and longer durations. Every experiment cannot be transformed into a movement. It is not necessary also. Only when one plans large-scale replication, one thinks of movements. Further, when one expects resistance one thinks of campaigns.

16. *Why are the attempts of the Parishad not institutionalized? Why do they not acquire a sustainability of its own? Why does it need the help and support from the state to continue? (And in turn gets jeopardized when the government changes?)*

Institutionalization can be done either by the government—from panchayat to the state—or by the NGOs. Establishing institutions for development on the NGO mode is not the agenda of the KSSP. It strives to transform the state. As far as the PRM is concerned, the government accepted it as its own programme in 1990 itself. More than one-third of the

panchayats have been covered. It requires 0.5 to 1.0 lakh rupees per panchayat and so the KSSP cannot do it by itself. There is no necessity [either]. Changes in government have affected only the formal involvement of the KSSP. At the panchayat level, the KSSP is involved to a greater or lesser extent. Of course, the pace and tenor of implementation, when done by the government, will differ from the KSSP mode. The PRM and other data gathering and management programmes will become regular activities of the panchayat only when its development possibilities are fully developed, which has not yet happened.

17. Why is the Parishad committed to the state when there is a certainty that the content and intent of the programme will get jeopardized when it is taken up by the state?

The Parishad is not committed to the state. It is committed to the people only. And that too, to the majority—the impoverished ones. It also does not feel it necessary to oppose the state at all times. It believes in utilizing every opportunity, occupying every space, and getting out when it is threatened to be squeezed or co-opted. Engagement with the state involves at times carrying forward the state's agenda in directions and extent not very much intended by it.

18. What is the role of culture in Kerala, which has allowed such a PSM to exist and continue? Does culture shape/modify science in any way? Can the cultural resources offer a possibility of being channelized for social transformation?

It became possible for the PSM to originate and thrive in Kerala because of the long culture of social and political movements. The relationship between culture and science is not direct and cannot be defined easily. Social transformation, not only for

its sustenance, but also for its very occurrence, demands major cultural changes, some form of a cultural revolution. Here, culture has to be understood in a broad sense, not limited to art. Science, philosophy, worldview, development concepts, ecology, gender—all these fall under this broad category of culture.

Dreams Without an Expiry Date: Musings of a People's Science Activist is MP Parameswaran's autobiography, an insightful personal narrative of a richly-lived intellectual and activist life.

Born in Kerala in 1935, Dr MP Parameswaran received his Bachelor's degree from the College of Engineering, Trivandrum, and his PhD in Nuclear Engineering in 1965 from the Moscow Power Engineering Institute. Until 1975, he worked with the Bhabha Atomic Research Institute, leaving only to begin working full-time with the Kerala Sastra Sahitya Parishad (KSSP).

From the time he spent in the Soviet Union to his work with the CPI(M) and the KSSP in Kerala, Parameswaran's life has been consistently marked by his commitment to better the lives of the dispossessed majority. This autobiography – these musings – provides an intimate look into one of the important minds behind India's nuclear program, a glimpse of an era by-gone and one still

Dr MP Parameswaran is an Indian nuclear engineer and a people's science activist. He is the founder secretary of the All India Peoples Science Movement (AIPSN) and the Bharat Gyan Vigyan Samithi, a national organisation for literacy and education.

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