

Wanderings

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Strategy

Oceana Publications, Dobbs Ferry, New York, 1969,
pp. 351–xiv.

A Richer Harvest—New Horizons for Developing Countries
Orbis Books, Maryknoll, New York, and Tata McGraw-Hill,
New Delhi, 1974, pp. 573–xxiii.

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In press, being published by Visva-Bharati, Calcutta, India.

A Better U.N. for a Better World

Being published by Visva-Bharati Research Publications,
Santiniketan, India.

Obligations of Affluence

In preparation.

Wanderings

IN SEARCH OF SOLUTIONS OF THE
PROBLEM OF POVERTY

SUDHIR SEN



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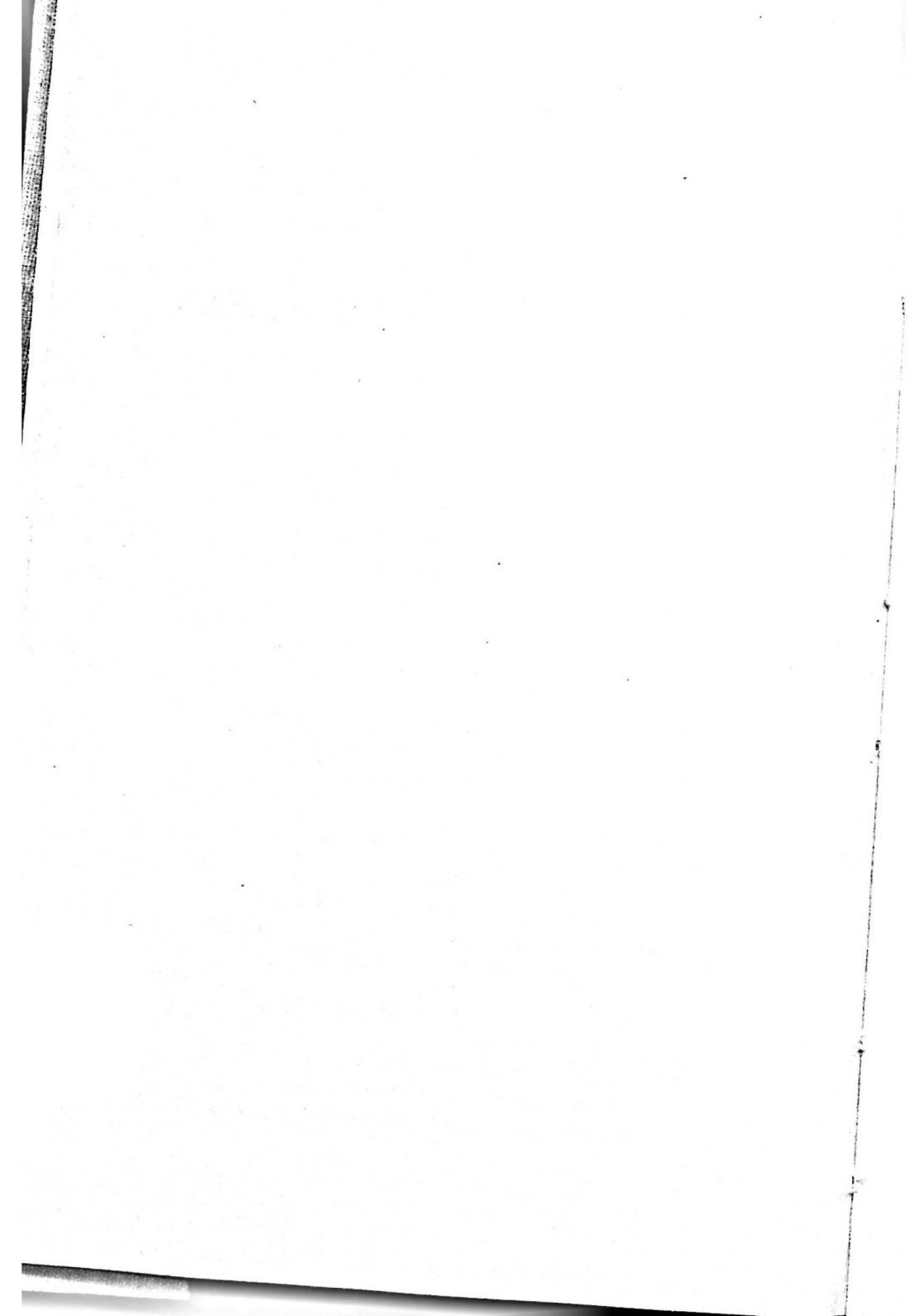
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1989

TO

MY CHILDREN AND GRANDCHILDREN

DA



Foreword

This is the brief, absorbing story of Dr. Sudhir Sen—a remarkable man who has managed to pack into his life many life-times of work and scholarship, reflection and experience. “Do the best you can with what you have where you are” is the simple maxim Dr. Sen has lived by, to the hilt—and the achievements are there for all to see.

Laurels sit lightly on Dr. Sen’s shoulders. In his multi-faceted career, he has held several high offices which have taken him to quite a few countries of the West and the East—developed and less developed.

After perusing the book, the thought uppermost in the mind of any thinking reader would be—How does India, with this kind of talent and dedication available to it, manage to remain poor? The answer is simple and will bear frequent repetition. A nation develops gloriously when knowledge and power are combined in the same individuals; it perpetuates poverty when some have knowledge and others have power.

Poverty is cruel but it is curable. The quest for eradication of poverty, which should be the Holy Grail for any government worth its salt, runs like a golden thread through the entire life-work of Dr. Sen. He combines an abiding emotional commitment to that cause, with the requisite knowledge of the means to achieve the goal. His WANDERINGS have all been in the field of economic rationalism, as distinct from economic theology. He has

no truck with any "ism" which is content with "low yield from high ideals". All the crowded years of Dr. Sen's life have been devoted to an unending "instinctive search for genes of ideas hoping to build some day a high-yielding variety of economics".

There would be a veritable transformation in developing countries if Dr. Sen's writings were made compulsory reading for ministers and mandarins in charge of the national economy. Hark to his conviction, wise and deep— "The truth is that poverty can be greatly alleviated with the tools and resources which [the developing countries] possess, and it can be done much faster than we realize or care to find out. Yet this is the message we have to carry to all developing countries—with the high-yielding varieties of crops and a high-yielding variety of economics and persuade them to get busy on development the right way." Dr. Sudhir Sen lights the way.

*3 February 1989
Bombay*

Nani A. Palkhivala

Author's Preface

THE manuscript of this book was prepared in 1974. Its main purpose was to spell out—to myself and to others—the background of a trilogy on Third World development I had embarked upon in the late sixties while serving as a Visiting Professor at Brown University (Providence, Rhode Island). It could therefore be appropriately treated as an Introduction to this three-part study. As it happened, however, only a few pages—about 10 per cent of the manuscript—was actually used as an introduction to the two volumes: *A Richer Harvest—New Horizons for Developing Countries* (1974) and *Reaping the Green Revolution—Food and Jobs for All* (1976). The balance of it remained unpublished.

As the development of the Third World began to falter badly, especially since the mid-seventies, and misgivings about the whole approach, particularly about foreign aid, both bilateral and multilateral, began to broaden and deepen, I was persuaded that it would be both timely and useful to publish the manuscript in full. For underlying the *Wanderings* there is a common theme which must be treated as the Number One item on the agenda of our time, namely: How to find solutions for the problem of mass poverty whose persistence and aggravation in an age of dazzling progress in science and technology proclaim the bankruptcy of the development policies the world has hitherto pursued.

Mass poverty can be—and must be—liquidated. Like everything else in life, it of course calls for the requisite

will, an unflinching determination, to achieve the goal. But will alone, however honest and determined, will not be enough. Understanding the nature of the problem and attacking it the right way with minimum lost motion and dissipation of energy is no less crucial. Like all wars, the war against poverty can be won only when it is fought with the right strategy. It is my hope that my wanderings which describe my own experiences in different countries and different situations, along with the Trilogy it introduces, will help work out the right strategy for stamping out poverty and hunger from the face of the earth.

Acknowledgements

I owe a special debt of gratitude to Mr. J. M. Kaul, Editor of the *Capital*, who first published the manuscript in instalments under the caption WANDERINGS to which a subtitle has now been added.

To the authorities of the Dag Hammarskjold Library of the United Nations I want to express my most grateful thanks. The facilities I have been enjoying here have greatly helped me in the preparation of my works.

I have received valuable help from Mr. Thomas J. Prendergast of the UN Photographs and Exhibits Section in putting together photographic material for this book, for which I thank him most sincerely.

Finally, my special thanks are due to Virginia Aquino for the meticulous care with which she processed the manuscript for the press.

20 January 1988
New York

Sudhir sen

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Introduction

MY work on this study actually began about six years ago – at Brown University in Providence, Rhode Island.¹ But in a broader sense I have a feeling as if I have been at it for several decades, groping – at first instinctively, then through conventional book-learning, followed by years of extensive travel and intensive home work – for some effective clues to the solution of what has long been, and remains more than ever before, our problem number one – the problem of poverty.

I was born and brought up in an exceptionally fertile area – at Comilla in East Bengal, now Bangladesh. “It is an amazing land,” said a Britisher, “just dig in a stick, and it will begin to grow!” Yet there was want all around. And what added a special poignancy to it was the sight of people struggling to survive happily on what little they had, often sharing their small mercies readily with others, especially within the framework of large joint families. The misery and the kindness both left an indelible mark on me.

Could one lighten this burden of want and add a little more cheer to life? I began to be haunted, and in later years tormented, by this question.

¹ In 1967–68.

Why Economics

An elder whom I held in high esteem once remarked to me, "We are a poor people, terribly poor. It squeezes all happiness out of life. Is there really no remedy?" The words were tinged with pain and reflected, at least so I imagined, a quiet appeal. They stirred an already agitated mind.

I recall how, in the mid-1920's, I brutally repressed the urge, all too common for an Indian, to study Sanskrit and Philosophy to sail through life with poetry and literature, how I goaded myself into the decision to major in economics, then acclaimed as the science of human welfare.

I repressed other urges as well. The impulse to boycott school and college following Gandhiji's call for non-cooperation was strong, but I stubbornly resisted it. To refuse to learn in British-oriented institutions, I felt in my bones, would be an error.

But I devoutly believed in Gandhiji's nonviolence. I saw how promising careers were blighted in the prime of youth because they did not follow his call to nonviolence, or because, following his call, they walked out of educational institutions, at times for good. I was saddened by what I saw, and this, no doubt, helped fashion my own attitude. But nonconformism had to be paid for. The price it exacted was a sense of loneliness in early life.

I did not spin—the economics of khadi, all along, left me unimpressed. However, in 1922 when the wave of

enthusiasm for khadi was clearly ebbing off, I took to it as a mark of respect for Gandhiji and as a symbol of economic nationalism, maintained a wardrobe of four pieces of khadi, and followed his "wash'n-wear principle" until September 1928 when I left for London for higher education.

It may be added, in parenthesis, that two other tenets of Gandhiji I imbibed quite early and have adhered to ever since, because they had a spontaneous appeal to me. After a year at the Hindu Hostel—the Hindu students' dormitory of the Presidency College, Calcutta—I moved over to a YMCA where one could freely mix with students of all castes and denominations. I also went out of my way to socialise with depressed class students; and, in later life, following Gandhiji's example, I made it a point to keep an "untouchable" as a domestic help in our Indian household.

My grades in Calcutta could not be better, nor my discontent more profound. I devoured books on economics, and felt not only no wiser but a lot more confused. And most frustrating of all, they barely touched the problems that had affected me so deeply. It was as if I had gathered a rich harvest of paddy straw without the rice kernel.

A memorable event of my undergraduate days was a journey by road all the way from Calcutta to Srinagar. On a bright March morning in 1927, three of us—a Sikh friend from the Punjab, a Muslim friend from West Bengal, and myself—set out in a new Buick driven by a Sikh chauffeur; and after making about a dozen stopovers en route, both for rest and sightseeing, we arrived at Gujranwala where we stayed a fortnight to attend some festivity before starting on the last leg of the journey to Kashmir.

Apart from the historical monuments, what impressed or distressed me most was the landscape. What a striking contrast it presented to the scenery I had been used to in East Bengal! For long stretches everything looked so dreary with little or no green on either side. The blazing sun, the hot wind, the all-too-common dust storms, the land stripped of vegetation, bare and almost barren—all this set my mind a-thinking. I also remember how the sand-filled rivers, as we crossed them one after another, filled me with sorrow. There must be a causal link, I instinctively thought, between the dead rivers and the dry lands, and between them and the impoverished people.

And so I felt a kind of childish joy every time we saw the perennially-flowing Ganges, or when we arrived at some irrigation canals in the UP and saw the crops grown with canal water.

And I remember how, at Gujranwala, I used to slip out of the social surroundings, go to the adjacent canal for an evening walk, watch the glowing sunset at the end of a long hot day, the flowing water in the canal and in the fields, and the crops it sustained and felt within as if I had found a combination of poetry and economics.

Some fifteen years later I had a similar experience during a visit to the Agricultural College at Layalpur, now in Pakistan. In fact, the sight of water flowing under a tropical sun and used for raising crops has never lost its fascination for me. Few things can match it in creativity.

At the LSE

The London School of Economics gave me the permission, in 1929, to register myself for post-graduate work. But diffident and nervous, I decided to be an undergraduate once again, and opted for a B.Sc. rather than a Ph.D in Economics.

This nonconformist decision horrified some friends, but I have never regretted it. The diversified curricula for the lower degree proved to be a great asset. Its broadbased approach certainly helped broaden my outlook.

Yet during those LSE days I was troubled by some nagging doubts. There was a wide discrepancy between economics in theory and economics in practice. For example, Britain, the champion of free trade in a protectionist world, was at that time turning to Imperial Preference. What, then, should be the right approach for a country like India? And how far could she safely rely on theoretical principles when deviations from them were rampant in Britain and elsewhere; when, moreover, the principles themselves were subjected to radical rethinking under the impact of the Great Depression and the New Economics Keynes had just begun to develop?

And were we looking at other countries and their problems too much through British eyes? I strongly suspected that we were, but was unable to pinpoint how and where. Above all, how should one tackle the problem of poverty in a country like India? My study shed little

significant light on this crucial issue. It left me with many questions, and few answers.

At this point my instinct impelled me to another unconventional step: I decided to go to Bonn to do my post-graduate work there with Joseph Schumpeter.

To Germany for a Ph.D in economics! What value will it have in India? And what about the language problem? In the eyes of my Indian friends at the LSE this was a crazy idea, and they did their best to dissuade me.

In this hard decision I received strong support from Harold Laski whom, like a great many other LSE students, I used to admire, even revere. He thought my decision was "very wise", wanted me to convey his personal greetings to Schumpeter, and to let him know how I got on with my "German adventure". Laski's words set my mind at ease. It gave me all the reassurance I needed.

At Bonn

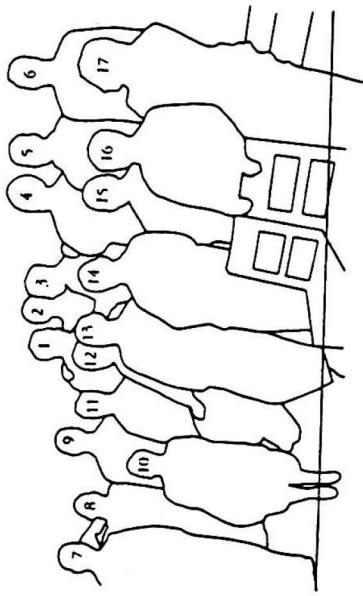
The welcome Schumpeter accorded to me surpassed all expectations. It began with a lunch on the lovely terrace of his villa overlooking the Rhine on a bright warm day in July 1931. He offered to pour some Rhine wine into my glass; and when I declined, he paused, took a few sips himself, smiled and then very politely enquired if it, by chance, had anything to do with my religion. I said in reply that there was no taboo and I believed in none. His good secretary who hosted us at the table was visibly relieved, and urged me not to stay away from such good things for too long.

Lunch over, it was time for business. "The students here are very friendly—they enjoy the Rhine, the mountains, the wine, the girls, but none of my students are reputed to have died of overwork," he said smilingly for an introduction.

What about the subject of my research? My worldly-wise compatriots at the LSE, having failed in their act of persuasion, had urged me, at the very least, to do my research on some Indian problem and to write the thesis in English, as was the practice in those days. And so I broached the suggestion to Schumpeter, though rather hesitantly. But he quickly talked me out of it. It would be best for me to study Western conditions while abroad, and therefore to do research on some Western problem of topical interest. It was the technique of research that was



Schumpeter with members of an economics seminar
he gave at the University of Bonn in 1931.
The participants: (1) Sudbir Sen, (2) H. Wilhelms,
(3) August Läsch, (4) Herbert Zassenhaus,
(5) Wolfgang Snöper, (6) Martin Wiebel,
(7) Hans Singer, (8) H. Spott,
(9) Theodor Wessels, (10) Christa Hasenclever,
(11) H. Kuschmann, (12) H. Schmitz, (13) Schumpeter,
(14) Erich Schneider, (15) Karl Bode,
(16) unidentified, (17) Günther Harkort.



*Group photo with Schumpeter and the members of his Economic Seminar at the University of Bonn.
December, 1932.*

important, he argued, and once acquired, I could apply it later entirely on my own to Indian problems. I bowed and readily agreed.

Then he took a slip of paper, about 2" x 2", and jotted down three subjects. The first was international gold movements with special reference to the rapid buildup of gold reserves in France, its causes and effects. I accepted it as my research subject.

What language should I use for my thesis? Again, Schumpeter had no doubt in his mind: the University would prefer German, and it would be good for me to learn the language which would be a valuable acquisition for the future. Once again, I deferred to his advice.

The decisions were made. I had no illusion about their implications. Was I disturbed? Not in the least; I was no longer nervous or diffident, and at heart I was grateful to Schumpeter that he had blocked the easy path, saved me from myself, and pushed me mercilessly—and mercifully—into a venturesome course.

So, that summer I studied German almost crazily to make as much progress as I could before the Semester started. Soon it became more of a fun than a chore.

It was not long before I began to discover the real Schumpeter. Behind his disarming Viennese politesse lay a hard taskmaster; and behind this again, there was the philosopher, guide, and friend. He tended his tiny flock of a dozen graduate students deftly and fondly. How to evoke the best in them was his never-failing concern.

At his Seminar he would pass packs of cigarettes, make everybody feel at ease, and then plunge into intensive two-hour long discussions. He would entertain students to a sumptuous dinner, and then launch on discussions past midnight until keeping awake became a problem.

Sometimes he would meet a few students in a café after dinner and discuss all kinds of things for hours. On one occasion he joined his flock at a carnival festival, sat at a table in his immaculate uncarnival dress, sipped wine, smoked intermittently, watched the noisy, colourful scene, chatted with the students in between dances, enjoyed seeing them enjoy—until the wee hours of the morning. After all, he did not wish them to die of overwork.

As for my research, he gave advice and guidance from time to time, recommending reading materials in German, English, French, sometimes even in Italian. Once he suggested that it would be a good idea for me to go to Sorbonne and meet Professor Albert Aftalion who had just published a study on international gold movements. The major premise implicit in all this guidance was a simple one – the business of a student was to study. And if he was deficient in any respect, such as knowledge of languages, it was his duty to make it good as best and as fast as possible.

How fortunate we were to have a teacher who was so inspiring, so demanding, yet so caring! For me this was a priceless experience. A great theoretician, Schumpeter was meticulous about facts; and as with all great economists, inductive logic was part and parcel of his system. Research, he therefore insisted, must be based on painstaking compilation and analysis of all relevant data.

His Seminar was a sort of laboratory for dissecting ideas. All assumptions underlying a thesis, including the implicit ones, were isolated, examined and weighed one by one before arriving at a conclusion. The methodology was not new; in fact, it is followed as a matter of course by physical scientists. The striking thing was that it was applied, with unusual rigour, to a social science.



A lighthearted moment at a Carnival in Bonn with Frau Professor Spiethoff, wife of Professor Arthur Spiethoff, then head of the Economics Department at Bonn University, 1933.

Given this approach, no wonder that he had little patience with ideologies; and the worst thing a student could do was to embrace or reject any uncritically. He often reminded the left-leaning students of the midnight oil Karl Marx had burnt for years at the British Museum before he developed his thesis. True Marxists should, above all, follow this example. They were free to arrive at, and uphold, their own conclusions, provided they first went through the same kind of rigorous intellectual process.

Schumpeter was a great believer in catholic education. Specialisation was essential, but only within a broad framework, with an unending intellectual quest and a constant effort to extend one's horizon. True education needed both dimensions.

Fortunately, even the doctorate at Bonn required, in addition to a thesis, several courses, such as Arthur Spiethoff's economics mainly of the historical school and theory of economic cycles, Herbert von Beckerath's applied economics with emphasis on world problems, and Karl Rössle's business organisation and management, which included frequent visits to mines and factories.

My actual association with Schumpeter was short—in 1932 he left Bonn to join Harvard. But the impact it made on me was profound. Moreover, the spirit he left behind continued to dominate our small group; and as its only foreign member, I enjoyed a special status. I learnt a great deal from my German friends. Some became my young gurus.

After January 1933¹ the political climate changed abruptly. We watched the blitzlike march of events with

¹ Hitler came to power on 30 January, 1933.

dismay. Quite a few left the country in different directions. Some disappeared in the revolution.

And here is the most remarkable fact about this Bonner group: None surrendered the liberal ideal of free thinking and professional integrity. Some, like August Lösch and Günther Harkort, upheld it even in the darkest days of totalitarian tyranny over the mind. Others—Karl Bode, Hans Singer, Wolfgang Stolper—carried the torch abroad, to Britain and the USA.

Post-postgraduate Work

After Bonn I entered a phase of independent research, study and self-education—at Kiel, Berlin, and Hamburg, supplemented by a fair amount of travel on the continent—to learn by seeing.

While at Bonn, I was supported by a fellowship from Alexander von Humboldt-Stiftung, Berlin. My later research was, for a while, backed by Deutsch-Akademischer Austauschdienst, Munich. Schumpeter, and later Beckerath, had tried to help me go to Harvard, but a fellowship in those depression days for an Indian to study in the USA did not prove feasible.

So I took to some financial journalism to keep myself financially afloat, writing mainly for German papers and mostly on international monetary and economic problems. To pursue research and study while enjoying the thrill of hand-to-mouth living was the easiest thing to do in the non-affluent thirties. All I needed was to follow the example set by several German friends.

My five years in Germany taught me many things. Above all, it was fascinating to study history, economics and politics in other languages, and to see the past and the present through different eyes. The Russian situation intrigued me a great deal; I studied it, as far as possible, from outside, always hoping that some day I would get there to have a look from inside.

With the change in the ideological climate, Germany's appeal to me began to wane. And so, in October 1936, I



Sudhir Sen in Milan, Italy. December, 1937.

went back to the LSE to continue my research. The following year there came an unexpected job offer – to serve as economic adviser to the International Thrift Institute (*Istituto Internationale del Risparmio*) in Milan. A chance to see Italy, and to learn Italian! I grabbed it, more so as by then I definitely needed a job.

Much of my work at Milan consisted of analysing specific problems and writing for the Institute's journal on saving and investment. Travel and sight-seeing, visits to art galleries, learning Italian, and studying the economy easily filled my spare time.

The Munich tete-a-tete was over, and Chamberlain returned home with his umbrella and the peace-with-appeasement package. Yet Hitler's grumbling became louder still. At times it sounded like the rumbling of a coming war. Rather puzzled, I turned to August Lösch for some light. Came his reply: "The European storm is coming. It would be senseless for you to be caught in it. Better return to India." So I packed up, made a month's tour through Europe, sailed from Naples, and arrived in Bombay, 2 January 1939, after spending over ten years in study, research, work, and reflection.

Now I had two poverty problems to work on – my own and of the country.

In Indian Villages

In spring 1938, while still at Milan, I received a call from Mr. Leonard K. Elmhirst to go and meet him at Davos in Switzerland.¹ The meeting led to my acceptance of a job offer from the Elmgrant Trust Fund to go to Tagore's Institute of Rural Reconstruction at Sriniketan in Birbhum district, West Bengal to help develop its economic activities.

The Institute was a small place, set up mainly to serve a group of fourteen villages. Poorly endowed, it was rich in problems, and in that sense it was a microcosm of rural India. Though I had been well acquainted with rural Bengal in my teenage, this was my first real encounter with its problems.

The three years of my active association with Sriniketan were crowded with experience. I gained much insight into the character of the problems, and what made them so intractable. I studied and analysed them,² experimented with some solutions, and booked a few successes along with many frustrations.

¹ Mr Elmhirst, among other things, was the Founder-President of the International Conference of Agricultural Economics, Political and Economic Planning (PEP), London, Dartington Hall Institute at Totnes, Devon, and Elmgrant Trust Fund. A long-time associate of Poet Tagore, he had also served as the first Director of the Sriniketan Institute when it was founded in 1921.

² Some of these studies were published by the Institute: Land and its Problems (1941); "Tagore on Rural Reconstruction" (1942); Conflict of Economic Ideologies—an Attempt at Reconciliation (1940).

In 1939, Pandit Jawaharlal Nehru came on a visit to Santiniketan. He was then Chairman of the National Planning Committee, which had just been established in Bombay. A talk with him led to my becoming the Member-Secretary of the NPC's Sub-committee on Rural Marketing and Finance. This brought me into close contact with some of the best minds working on problems of rural development in different parts of the country.

Even in those days India's food situation seemed to me rather precarious, even at the low rate of per capita consumption. Burma, a significant source of rice supply, had been separated from India in 1937. Two years later the imports of Burma rice were cut off for a while, and shortages developed in Calcutta and other urban markets accompanied by a spurt in prices. This induced me to write some articles stressing the ominous implications of these events.

Around this time I had occasion to carry out a survey of the Calcutta food market, on behalf of the University of Calcutta, with the help of a few assistants.³ The survey revealed or confirmed many interesting facts. It was a marvel to see how supplies flowed in from all directions to feed the masses of people crowded in this metropolis. The skill, enterprise, and shrewdness of the trading community compelled admiration.

The demand stimulated production in many areas. The key determinant was always the transport facilities. Fruits and vegetables often came over long distances, even from north UP, Kashmir, Afghanistan, and Madras, but many potentially rich areas within a radius of 50 miles or less were unable to produce for the city because

³ This study was personally sponsored by Dr. Shyama Prasad Mukherjee, then Vice Chancellor of Calcutta University.

Dr Sudha Sen
Samikshan (Royal)

Sudha Sen
Dehra Dun
Nov 24, 1961

My dear Sudha Sen,

Thank you for sending me the two pamphlets which I read with great interest. I would congratulate you on your essay on "Capital & Economic Policies in India". I think it is a courage and very able presentation. You can see, if you like, I agree with the approach and the general conclusions. I can understand, although may not wholly agree with, the special emphasis that each party puts on its own viewpoint. But what distresses me is the way in which it refuses to consider calmly and dispassionately the other's viewpoint. How we become slaves of our own words and slanders!

I am sorry the N.P.C. is in all stages. I would like to continue to function despite my absence but the others were irreplaceable to them.

Sincere yours
Jawaharlal Nehru

M 29/11

o

Transcript of Pandit Jawaharlal Nehru's
Hand-Written Letter on Page 20

District Jail
Dehra Dun
Nov 24, 1941

Dr. Sudhir Sen
Santiniketan (Bengal)

My dear Sudhir Sen,

Thank you for sending me the two pamphlets which I read with great interest. I want to congratulate you on your essay on "Conflict of Economic Ideologies in India". I think it is a concise and very able presentation of the case and, for my part, I agree with the approach and the general conclusions. I can understand, although may not wholly agree with, the special emphasis that each group puts on its own viewpoint. But what distresses me is the way in which it refuses to consider calmly and dispassionately the other's viewpoint. How we become slaves of our own words and slogans!

I am sorry the N.P.C. is in cold storage. I wanted it to continue to function in spite of my absence but the others were not agreeable to this.

Sincerely yours
Jawaharlal Nehru

M 25/11

Note: N.P.C. stands for the National Planning Committee, of which Pandit Jawaharlal Nehru was Chairman. The sign 'M 25/11' shows that the letter was passed by Censor on 25 November, 1941.



Sudhir Sen with Gandhiji at Sriniketan, Visva-Bharati, January, 1940.



Gandhiji and Tagore at a reception in Santiniketan, January 1940.

they lacked the transport linkages. The wastage of perishables was extremely high. The spread between the producer's and the consumer's price was, in general, shockingly wide because of high wastage, costly transportation, and the long chains of middlemen. A ring of a few powerful merchants maintained a stranglehold on the fish market in Calcutta.

The research enriched my knowledge, but yielded no practical result.

At Sriniketan and also later, I made an intensive study of the economics of our handloom industry. And on an invitation of the Commercial Museum of Calcutta I gave an address on the subject (on 23 February, 1941). The meeting was presided over by Dr. B. C. Roy (who, after independence, became the Chief Minister of West Bengal). I presented rather forcefully my three-part thesis which I had developed and have clung to ever since on this important subject, namely: The economics of khadi is poor; output and income per hour from hand-spinning are much too low; the market for khadi, both existing and potential, was far too small; intrinsically, it was not a viable cottage industry.

By contrast, handloom weaving had survived many shocks and was a major source of rural employment and income. Besides, the market for handloom products, despite the inroads made by mill-made goods, was still significant. And its potential for future growth was vast, for jobs as well as income.

To strengthen the weaving section I made four recommendations: supply of yarn at or near cost price from modern, government-sponsored or cooperative spinning mills; a Design Institute established with government aid to supply the weavers with a steady flow of quality

designs that would also appeal to the public; better facilities for marketing the products; and, last but not least, conversion of handlooms into powerlooms as rapidly as possible. These steps, if systematically taken, would greatly increase the output and income of our weavers. And they would enable them to compete even with the most modern textile mills comfortably from their home base.

Dr. Roy complimented me on the presentation and warmly supported my main ideas. Even the khadi-clad members of the audience applauded perhaps out of politeness, or perhaps not. The address, later enlarged, was published as a booklet and circulated fairly widely. But on the policy or action front it hardly created a ripple.

Reluctant Ghost Writer

In 1942, by an accident, I found myself landed in Delhi, this time to serve as the Private Secretary of a Member of the Viceroy's Executive Council, Mr. N. R. Sarkar, then in charge of Food and Commerce portfolios. One of my major tasks was to study files and prepare comments, and this gave me a first-hand view of the system-at-work at its highest level.

In addition, I had to do a great deal of ghost writing. To write to someone else's convictions—or lack of them—went against my grain, and I felt as if it was really my ghost that was at work. Luckily, this agony did not last long. Gandhiji started his fast unto death; Mr Sarkar resigned under public pressure; I prepared for him a pleasant-to-all public statement in justification of the step he had taken, and breathed a sign of relief.

But I had miscalculated. There was no immediate liberation for me. Evidently, my ghost had served the master too well. For he told me in his uncorrupted Bangladesh dialect: "In the past I have often changed my private secretary, but now I have decided not to change any more." I was scared by the implied compliment. However, luck favoured, and after a few months I managed to work my way back to freedom without an ostensible hitch.

A Traumatic Experience

Early in 1943, it fell to my lot to serve as the Economic Statistician in the Civil Supplies Department of the Government of still-undivided Bengal. And the first task assigned to me by its Director, a senior British ICS officer, Mr. L. G. Pinnell, was to assess the foodgrain situation in the province.

By then, the problem had acquired great urgency. The war had rolled close to Calcutta – some stray bombs had fallen on the city; and symptoms of shortage were developing in many places. A deficit of 9 per cent had been projected for the year; and the Centre had been requested to ship enough supplies to fill this gap.

But my own study revealed a far more dismal picture. Despite the lack of sufficiently hard data, the deficit, even on the most conservative assumption, appeared to be far greater – about 23.5 per cent.

The Director's first reaction was one of incredulity, but he had an open mind, and he fully realised the practical implications of the projection. There followed further discussion and analysis, and, after a few weeks he veered round, and was ready to accept my estimate and to ask the Centre to revise the province's requirement figure accordingly.

Suddenly there was a reshuffle in the Government. A newly-elected minister took charge of the Department, and with him came a new ICS officer to serve as Sec-

retary. The approach now became unabashedly political. The shortage was deliberately downplayed; and it was conveniently attributed to hoarding, even though hoarding was only a concomitant of the fast-developing shortage and therefore no more than an aggravating factor. To assure the public became the first policy objective; so when prices of rice rose in several districts and fell in one, the drop was duly publicised while the rises were quietly passed over. In all this the Secretary followed the Minister's predilection rather than giving him independent advice.

I marked time in agonising impatience, predicting that this cruel publicity facade would crumble in a matter of months since, by then, people would begin to die by the hundred on the pavements of Calcutta. Came May; the famished crowded into the city; they began to drop down dead, not by the hundred but by the thousand. I was dismayed to see this ghastly fulfilment of my own prediction. An estimated three million people perished that year in the now-famous Bengal famine.

Soon, a high-powered Enquiry Commission was set up to perform a post mortem on this grim tragedy. Its findings confirmed that the food deficit I had estimated was substantially correct. This, however, was no consolation. For I knew only too well how utterly useless I had been in reducing the magnitude of the calamity even when I foresaw it coming. And I was saddened by that knowledge.

Light from TVA

By then, my faith in economics had been rudely shaken. Politicians, businessmen, civil servants—all acted as economists; thinking moved along old, narrow grooves; quality of study and analysis did not seem to matter; wrong policies went undetected, and wrong actions unpunished. Was it, then, a mistake to study economics? My doubts grew, and I was about to confess to myself that it was.

Then came a flood of light, and the gloom lifted. The light came from a remote corner of the globe.

David Lilienthal's book on TVA¹ had just been out; Mr. Elmhurst got three copies despatched to India through the USIS. I was the lucky recipient of one, and I eagerly consumed its contents.²

Its message came out loud and clear: In every region man's welfare depends, in the final analysis, on its natural resources—soils, water, minerals, forests, and, of course, sunlight and air; the task of development is to develop these resources by intelligently using science and technology.

The task of economics is to apply the tools of economic analysis to achieve the best possible results in terms of production, jobs and income, and, therefore, to book the

¹ *TVA: Democracy on the March.*

² The other two copies went to Mr. R. G. Casey, Governor of Bengal, and to Lord Wavell, Viceroy of India.

economies of an integrated approach, to minimise resource-cost, and to maintain the right balance between utilisation and conservation. And all this was backed by a wealth of data and examples drawn from TVA's own experience.

Lilienthal's *TVA – Democracy on the March* marked a decisive turning point for me. It opened up a new, fascinating perspective; it gave me the master key to development economics I had long been looking for, and had vaguely and instinctively sensed during the road journey of my college days – in heat and dust – through the fertile wasteland of North India; and once again, it set my mind on the march. Not only that; it conjured up the vision of the entire underdeveloped world marching towards a better life. That vision, despite many frustrations, has sustained me over the years. And in this age of multiplying population and multiplying opportunities, it continues to fill me with anguish and hope.



Birth of “India’s TVA”

In the critical post-famine year, Mr. Elmhirst came over to Calcutta on a special invitation of Mr. R. G. Casey, just appointed Governor of Bengal, to serve as his Agricultural Adviser. And on Mr. Elmhirst's request I was associated with him to help in his assignment. Several projects were quickly initiated to tackle both immediate and longer-range problems.¹

A significant event was our meeting, around this time, with William L. Voorduin, a Planning Engineer from TVA, whose services had just been obtained on a request from Lord Wavell, then Viceroy of India. A disastrous flood in the Damodar river, coinciding with war and famine in 1943, had impelled the Government to this step. The monsoon-fed Damodar was notorious for its periodic rampage and the heavy damages it inflicted on each occasion in a fertile area of West Bengal. And it seemed to be ideally suited to multipurpose treatment on TVA lines.

“The engineering tasks involved in the Damodar are easy,” observed Mr Voorduin. ‘It is the economic and social problems that are going to be tough.’ Yet they had to be resolved, he implied, to maximise the benefits from

¹ These were later published as *Collected Notes on Agricultural Problems in Bengal*, by L. K. Elmhirst and Sudhir Sen, Government of Bengal, Calcutta, 1945.

the use of land, water and power, and therefore from the investments.

Within a year he produced the outline of a scheme for the unified development of the Damodar system. It provided for seven medium-sized dams with hydro-power stations, a diversion weir, a large thermal station to firm up and supplement seasonal hydro, an irrigation barrage with a canal system to irrigate 1,040,000 acres, a 90-mile navigable channel linking the coal fields with the Hooghly river and, 35 miles downstream, with Calcutta. The cost was estimated at Rs 55 crores, or \$110 million at the then-prevailing exchange rate.

Not long after that something unexpected happened: I found myself harnessed to the Voorduin-designed Damodar Valley Project. And so during 1946-47, I was confronted with a twofold task: first, to deal with the numerous criticisms which had been levelled against what was considered to be an ambitious project involving massive investment of capital, especially when judged by the standards prevailing in those days, and to appraise the expected benefits in order to establish fully its economic soundness; and second, to reconcile the conflicting views and interests of the three participating governments—Bengal, Bihar and the Centre—and thereby to pave the way to an agreement among them.

Both tasks had their complexities. It was the second one, however—the political engineering—that was incomparably more delicate. For example, there was a Congress Ministry in Bihar, and a Muslim League Ministry in Bengal. Would they agree to promote a joint venture? The cynics confidently predicted ‘never’. A senior civil servant, anxious to instil into me a sense of realism, said patronisingly: “You see, Mr Suhrawardy, the Muslim Chief Minister, cannot agree to the development of a predominantly Hindu area in West Bengal.”

Bihar was particularly adamant on a ground which, at least *prima facie*, could claim some validity. The dam sites were all in Bihar, the irrigated area would all be in Bengal. Why should Bihar's land be submerged to benefit Bengal? This became a major obstacle.

There were at least a dozen other hurdles to overcome. A senior civil servant listed them cheerfully and argued persuasively why no progress was possible. Some even wished the negotiations would fail.

But persuasion worked. It worked because it was backed: first by a critical, factual analysis of all the principal issues to indicate the most rational solution in each case; and, second, by a tenacious effort to pool whatever goodwill was available from whichever quarter to promote the cause. It was a proud day when, in April 1947, at a conference in New Delhi Mr Suhrawardy stood up, complained about the Centre's "stepmotherly treatment" of a great project, and urged it to proceed with due despatch for its execution. The Bihar Minister was equally strong with his support.

A bill was drawn up to establish a regional agency—the Damodar Valley Corporation—patterned largely on the TVA. But independence was in the offing, the country was soon to be partitioned, and this would directly affect Bengal. No further headway could be made until this operation was completed. We were forced to mark time.

To MOSCOW

So I marked time at the project's camp office at Hazaribagh in the Upper Damodar Valley. Suddenly I was summoned to Delhi by the External Affairs Ministry. On arrival, I found the reason: Prime Minister Nehru wanted me to go to Moscow to serve as Economic Adviser in the newly-established Indian Embassy. I was delighted. It was a dream come true.

The last night before my departure, the Prime Minister called me to his residence. He wrote a personal letter while I waited, sealed it, and handed it over to me to be delivered to the Ambassador Mrs Vijaya Lakshmi Pandit on my arrival in Moscow. He spoke briefly about my new job, wished me good luck, and then quickly turned to an unexpected subject.

It related to Mahesh, an old member of his domestic staff, who was also due to fly via London to Moscow with the same party. He had never travelled much even within the country, and now he was going to Moscow; he did not know any foreign language, not even English; he had no foreign exchange. The Prime Minister was worried. I begged of him to delegate those worries to me, and assured him that Mahesh would be looked after by me personally, both en route and in Moscow.

I was touched, but not surprised by this Mahesh episode. It was only one example of what he was known for

and loved for—his deep concern, his love for the common people. In this respect he was in the best tradition of India, along with Gandhiji, Vinobaji, and others.

India's tragedy begins when it comes to translating this overflowing love and concern into reality through viable policies. The greatest leaders of India have usually booked the worst failures, perhaps inevitably so because they thought too much through the heart. In this respect, too, Prime Minister Nehru has been no exception.

After a rather long wait in London for the Russian visa, we finally arrived in Moscow, in August 1947. And almost immediately I began my home work—studying Russia, its past and present, and of course the language.

Normally, there is, or at least used to be, a long waiting period for fresh arrivals before they could move beyond the precincts of Moscow to see things and visit institutions. Luckily, it proved quite short in my case. The interesting glimpses I was able to acquire need not be recounted here, but one or two points are worth commenting on because of their special relevance.

I visited several collective and state farms ("kolkhoz" and "sobkhoz"), which were of great interest to me. Following this, there were discussions with some senior officials in the External Affairs Ministry on my impressions. I emphasised the positives: Soviet Russia, with its vast expanse, high land-man ratio, long and severe winter, and short growing season, must travel the path of large-scale mechanised farming; machine tractor stations, too, made a lot of sense. In all these respects conditions in India were just the opposite. She must remain overwhelmingly a country of small farms with very intensive agriculture, as in Japan, though there might be some exceptions, particularly where plantation-type industries were involved.

Embassy of India.
Moscow.

Dear Dr. Sen.

It is not necessary for me to send you a formal appreciation of your work & the assistance you have rendered to us. I do so because I want you to know that we are under a debt of gratitude to you & that your absence will be felt in this Embassy.

Please carry with you my very best wishes, & the hope that soon you may be able to achieve what you have worked for these many years.

Very sincerely

Vijaya Lakshmi Pandit.

6th Feb. 1948.

I knew very well that I was "deviating" from the accepted Marxist line. What was the reaction? They agreed with me and complimented me on my analysis! And later they spoke appreciatively to Mrs Pandit of my "serious approach" to problems.

I was gratified, but not surprised by this reaction. True Marxists, as Schumpeter used to say, must respect facts and logic. Professional experts of Soviet Russia and of other socialist or communist countries, I have found again and again, not only respect facts and logic, but expect them from others. They are, essentially, no different from Western experts. There are, of course, some who adopt Marxian dogmas as believers and therefore without thinking, also others who are engaged in a quest for power, not for truth, and manipulate economic dogmas to attain political goals. They are, by definition, non-scientists and non-experts, which is all the more reason not to surrender reason to them.

Several things impressed me deeply: the way Soviet Russia had stamped out illiteracy, the tremendous emphasis it laid on education at all levels, and made it available at no cost or very low cost; the socialised medicine that provided at least a minimum medical service to everybody, again at low cost or no cost; the recognition of the right to work so that all able-bodied people—men and women—were provided with jobs, even if at subsistence wages; the public works programmes that created jobs and built up the economic infrastructure.

And I was intrigued to come across Stalin's slogan: "Our aim is to combine American methods with Russian planning." This is a striking example of Soviet Russia's "pragmatic" approach to Marxism, which is so often lacking in those who follow the Soviet model.

Would collectivised farming work, and serve Russia's interest best? And what about her industrial management? On both counts I had serious doubts even in those days, and they have grown stronger over the years.

My stay in Moscow was unexpectedly cut short. Mrs. Pandit regretted this, and so did I, but Delhi's wishes prevailed. I was asked to go to the TVA, study its activities on the spot, and to return to India to serve as the chief executive of the DVC, which was about to be established.

To the TVA

I arrived at Knoxville (February 1948), and immediately felt at home. In addition to Lilienthal's book, I had pored over TVA reports and documents Voorduin had loaded me with, and this had familiarised me with the Valley. The visit was the fulfilment of a dream I had cherished for several years. And quite sentimentally, I felt as if I was on a pilgrimage to the world's greatest laboratory of experiments on economic development.

I moved about freely, visited most of the dams – from the Norris to the Wilson – and saw a great many people who received me warmly, and generously gave their time to discuss programmes and problems.

They included Chairman Gordon R. Clapp. A strong link was forged between the TVA and the DVC, a link which, on a personal basis, lasted until his premature death in 1963.

The high point of my visit, as of a great many other visitors who streamed to the Valley in those days, was the discourse by the scientist-philosopher Dr. Harcourt A. Morgan. One of TVA's immediate concerns was to stop the cultivation of row crops – cotton and tobacco – on the slopes which induced erosion, impoverished the land, accelerated the runoff and siltation of the river-bed, and aggravated floods.

His message to the farmers was couched in dramatic terms to reflect the urgency. In effect, it said: "Thousands

of tons of water pound every acre of your land year after year to loosen the topsoil and to wash it down into the river. Cover it up with matted crops! Cover it up before it is too late!" The message was carried to the field by the extension workers with an action programme in which demonstration farmers using subsidised phosphatic fertilisers were given a pivotal role.

The technique proved highly effective. Tobacco and cotton were increasingly replaced by soil-binding crops, especially fodder for livestock. The great Doctor beamed with joy almost like a child as he rolled out the facts. "It's coming, it's coming," he said; and as he criss-crossed the Valley year after year, he could see from the plane that down below it looked less and less bare, and more and more green.

This was only one facet of Dr. Morgan's comprehensive thinking about man and his resources. He classified these as exhaustible and inexhaustible, analysed their availability and use-potential, stressed the finite character of gas, oil and several key minerals, highlighted their scattered distribution over the planet, underscored how man's future directly hinged on some key elements – his pet example was phosphatic ores essential for rebuilding soil fertility and therefore agricultural productivity, all leading up to his scientific-naturalistic philosophy. He called it the "common moorings" of mankind.

It had some important corollaries: Man must live in harmony with nature of which he himself is a part; he must therefore protect the environment with loving care, not despoil it out of greed or thoughtlessness; he must maintain the right balance between rural and urban areas; and finally, nations must live in peace and harmony with one another to share the unevenly distributed, but mutually complementary treasures of nature.

The common moorings give mankind a common stake in world peace for common good.

Harcort Morgan preached his resource gospel with an evangelical fervour. And he drove his points home by displaying a set of vivid pictorial presentations. It was Madison Avenue at its best. Once subjected to the profoundly simple exposition of this challenging, down-to-earth visionary, one could not but see the world in a different light. It was hard to ignore his message, or to escape the contagion of his faith.

To Harcourt Morgan's inventory of resources I would like to add, especially in hindsight, one more: the so called human resources. Their development, in all categories, is an end in itself, and it is also a precondition for the development of physical resources. This was implicit in Dr. Morgan's analysis, and it is taken for granted in an advanced country like the USA. TVA, for example, was set up at a time when there was a glut of floating talent in the market. It recruited jobless professionals in large numbers, built up the technical organisations, and used them as the instrument for valleywide development.

In the developing countries the utilisation of human resources—even of the available professional people—is low, sometimes shockingly so as, for example, in India. This failure to mobilise and utilise human resources lies at the root of the trouble. It is the most proximate cause of the failure to make sufficient headway on other fronts.

Relevance of TVA Approach

Misconceptions about the TVA approach have been both profound and widespread – not the least in its homeland. It is not highdam-building, as is often assumed especially by engineers, though dams are likely to be an essential component in most cases; it is not large-scale power generation under government sponsorship, as the utility lobby in the USA tirelessly emphasised, though power should normally play a vital role in all TVA-type development. Nor need it necessarily involve massive capital investment as is commonly postulated. Its real meaning lies somewhere else – in an integrated approach applied to natural resources with inputs of science and technology, labour, and finance capital, all tailored to suit specific conditions, but always accompanied by an imaginative quest for new and better resource-use so as to pyramid benefits and thereby to achieve the best overall results.

In 1952, while commenting on a paper by a British economist Michael Young, I set forth my concept of the TVA approach in the following words which later found their way into an official TVA report:

“Let us look at our economic problem from another angle. The natural resources of a country consists of waters, soils (including standing forests), minerals, and, of course, air and sunlight. How about this resource-base in India? There can be nothing to complain about the

sunlight and air base; the mineral, especially the fuel-metal, base is none too broad; the soil-water base, though extensive, is far from so when judged in relation to the size of our population. Yet, it is out of these that we must produce all the physical goods for our people.

"In doing so we must aim at two things: we must try and extract every bit of wealth out of them; we must also build up and maintain their productive capacity at the highest possible level. This is the essence of resource economics, and it is here that the TVA has shown us a new way: You take a whole river basin as the unit area, apply unified development first to the river system by erecting multipurpose structures on it and then to the entire watershed, salvage every possible benefit at every point, at the same time make sure that the resources are not used up too fast, but are developed and managed on a sustained-yield basis, and in this way you build up, on a relatively narrow resource-base, the highest possible level of wealth, employment and income.

"This, to my mind, is the crux of the TVA approach. In India this approach was intended to be applied, for the first time, in the Damodar Valley. How far this experiment will succeed it is too early to say. One thing is clear: We cannot imitate the TVA in every detail. It is true that the behaviour of rivers is essentially the same all over the world; and so, in harnessing the Damodar river system, we may closely follow the TVA. But as soon as we leave the river and come to the land, we notice big differences. The Tennessee Valley has some 3.5 million people in an area of 40,000 square miles; our Valley is only one-fifth in size, but it contains 5 million souls. I heard the land-use planners of the TVA plaintively speak of the pressure of population on land in their Valley and the small size of their farms, which on an average consisted of 75 acres:

and I had no heart to tell them that the average "farmer" in the Damodar area has a miserable holding of 2.5 acres and that too sliced into odd pieces and scattered around in the village fields. These and other basic differences must make a corresponding difference, both in planning and the final economic results.

"Just because of these facts, however, it is all the more imperative to make our narrow resource-base support the highest possible edifice of wealth, jobs and income. And so the essentials of the TVA approach, though first tried out in the world's richest country, has an even greater, and not less, relevance to an old, heavily populated, resource-poor country like ours.

"The foundation of our economy will be solidly laid only when the unified approach, accompanied by the latest findings of science, has been applied to our waters, lands, forests and minerals."

The Annual Report of the Tennessee Valley Authority for the year 1952 ended with the above quotation. It was also incorporated in the new editions of Lilienthal's *TVA—Democracy on the March*. This, perhaps, should suffice to confirm its substantive correctness.

The best American ideals, I have often felt, have suffered most in-American hands. TVA is an excellent example of this truth. One can, indeed, speak of two TVA eras, with 1953 as the dividing line. The great work done in its first two decades stands as a monument to the ideal that had inspired this great experiment. Thereafter, the exigencies of domestic politics, fancied or real, coupled with a strange myopia quickly tarnished its image. Perhaps symbolically, the Valley, too, has been disfigured by strip-mining to an extent which, it is safe to say, would not have been tolerated by its original architects.

The result has been a double loss. Today, the environmentalists are clamouring for cleaner air and water. Few are aware that they are echoing, rather feebly, what TVA had preached—and practised—for almost a generation, combining flood control and erosion control with control of river pollution, and influencing location of industries through infrastructure creation, so as to forestall urban congestion leading to urban pollution.

The loss to the developing world has been no less tragic. The torch that had been held aloft in the first TVA era was lowered, and dimmed. With this died one of the best hopes of the underdeveloped nations.

DVC – the Years of Struggle

DVC's woes began almost as soon as it was established. Those who had sulked at the project and the agreement to go ahead with it were not disposed to practise christian forgiveness. Some high-powered engineers resented that this prize project fell outside their domain. Ministers, after celebrating the inauguration of India's TVA, were less enthusiastic about parting with power to an autonomous body they had themselves created. The civil service was bent on running this new enterprise according to old rules they had been accustomed to. It could not see the difference between a corporation and a department, failed to grasp the essentials of resource economics, relished the authority, and exercised it superficially and superciliously.

The surprising thing is that the DVC could strike root and survive in such a bleak atmosphere. It could do so mainly because of the strong support it received from several high authorities, especially in its fragile infancy.

In summer 1949, the Corporation, then barely a year old, came under renewed fire. The concept and design of the project, though previously accepted, were challenged once again, and the non-technical DVC Board was accused of making too much fuss about the "baby dams". A crisis loomed.

The onslaught of bias had to be resisted. Equally, a confrontation had to be avoided. What, then, could be the remedy? A brain wave helped rescue the situation.

The University Education Commission was just finishing its work in Simla. One of its members was Dr. Arthur E. Morgan, the first TVA Chairman. Could he be persuaded to come as a consultant, review the situation, and give his own views on the points at issue? Authoritative verdicts were essential to quench the rekindled doubts, and who could be a greater authority on the subject than Dr. Morgan? An urgent invitation went out to him. He accepted.

I spent an unforgettable week with him, mainly touring in the Valley, answering volleys of questions he incessantly fired at me. A living encyclopaedia, he expected other public servants in responsible positions to be cast in the same mould. Burning with dedication to the cause of public good, this American super-brahmin burnt with indignation at the sight of any laxity or superficiality. It was a hectic week; he spared neither himself nor myself. But I was immensely grateful that he had spared himself for us.

His report was characteristically forthright. The project was sound and well-planned; it had great importance for India and deserved full support of the authorities. The proposed design flood—one million cusecs—was, however, too low; some engineers, without prior experience in river valley planning, were persistent in their demand to slash it to one-half. Dr. Morgan urged it be raised at least to 1.25 million cusecs.

What about the sneering attitude towards this baby-dam project? It was demolished with one single sentence: The Damodar project was smaller in size, but more complex in reality than the TVA because it had more factors to coordinate, including irrigation and drainage which did not figure in the latter, and had therefore more problems to solve.

As for the decentralised corporate approach, free India, Dr. Morgan argued, should experiment with different types of administrative mechanisms. The DVC was a highly worthwhile experiment, and it would be wise to allow it to continue undisturbed.

He had also some home truths for the DVC – about the need for an experienced, overall chief engineer, better measures for headwaters control, the location of its headquarters. But he generously complimented the young organisation on its high morale.

Dr. Morgan's report was a tremendous help at a critical time, but the DVC's woes continued. Another line of attack that created some nervousness among political leaders ran as follows: A seasonal river, the Damodar did not have enough water, cost per acre-foot was too high, nor was there enough load for power. And when the first World Bank Mission came to Delhi, in 1949, it was whispered that the project lacked the needed data and documentation to support a loan application. Such were the charges levelled against what was, in fact, the best-planned, the best-documented, and the most economic project – for developing India's Ruhr Valley.

Clearly, there was only one way to meet the challenge – by securing a World Bank loan for the DVC. I therefore eagerly took on myself the burden of case-making: the loan application was submitted with a full economic analysis and backed by a whole series of documents. The project was immediately given top rating by the Bank Mission.

That year the World Bank extended its first batch of loans to India, three in all: \$36 million for rehabilitating her war-battered railways; \$10 million to the Central Tractor Organization in Madhya Pradesh; and \$19.5

million to the DVC for its Bokaro steam power and Konar dam projects.

The DVC loan, quite sizeable for the Bank in those days, assured the foreign exchange needed for the project. Even more important was its psychological impact. Public leaders were reassured. No one, thereafter, dared cavil at the economics of the project or complain about the lack of load for power. The hard-headed World Bank had evaluated it and found it creditworthy.

In 1951, David Lilienthal came on a visit to India. Would he see the Damodar Valley? We took it for granted he would. But no, his schedule was too tight to permit this! Yet it could accommodate visits to other major river valley projects. Apparently, some in Delhi were afraid—Lilienthal might set the DVC on the march!

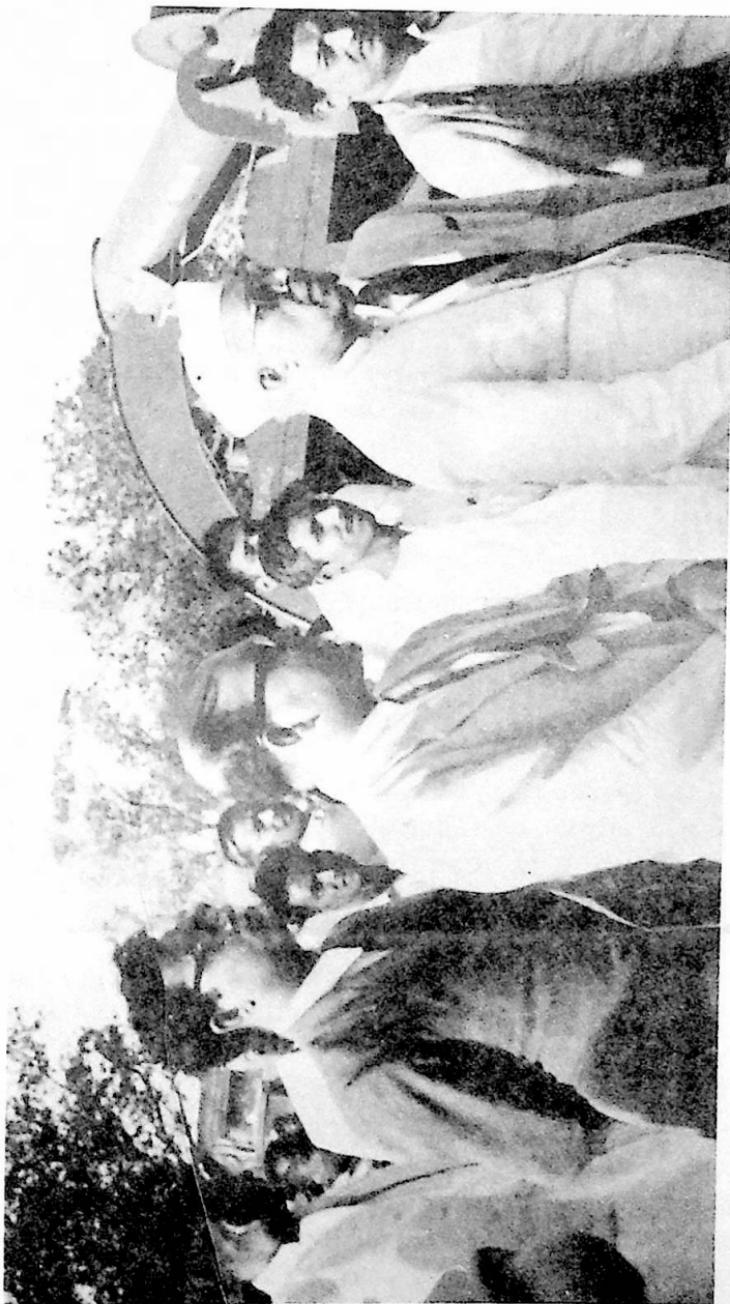
After some bickering it was agreed that he would drop in briefly at the DVC office in between flights. So he came, on 28 February 1951, at the headquarters office in Calcutta for about an hour. Did he sense DVC's troubles, the steady encroachment on its charter from the Central Ministry? Most likely he did. For, among other things, he warned: "Don't try to ride two horses"—one of dynamic business practice, the other of the slow-moving government department. A corporation, sure enough, was a much superior animal, "a race horse". But "see that you don't make it a half-horse, half-mule affair."

Two dams—Tilaiya and Konar—and the Bokaro thermal station were under construction. The anti-DVC school wanted to put a period there. The two crucial dams—Maithon and Panchet Hill—and the irrigation barrage and canals were in danger.

Construction costs were rising; there were substantial overruns in some instances. The Centre insisted on a



Prime Minister Nehru's visit to Tihaya Dam of DVC in 1952.



Prime Minister Nehru's visit to Bokhara Thermal Power Station of DVC in 1952.

revised cost estimate for the next phase with a fresh economic justification. This was a legitimate demand, something that a public-sector undertaking should in any case comply with. Once again, I took the responsibility to prepare the study. The economics of the second phase was impregnable—in fact, few projects could compete with it in payoff. But the apathy in some key quarters was equally impregnable. And so we were getting nowhere.

The World Bank, there was every reason to believe, would be glad to give a second loan. Yet, there were cynics within the DVC who turned down the idea; some civil servants had developed a marked allergy towards such loans because of the strings attached! I, for one, yearned for those strings. They were the best safeguards one could ask for to keep the project out of the political arena and to execute it efficiently according to a pre-determined schedule and with the assurance of adequate funding.

In 1953, General R. A. Wheeler, then a World Bank Consultant, came to visit the DVC. The clearance, this time, was automatic—after all, he was coming to see a Bank's client. At last there was a glimmer of hope.

I took the General round the Valley, showed him what had already been done and what needed to be done in the next phase, and, as usual, arranged at different points meetings with the technical people to supply whatever information he was interested in.

At the end of the trip I broached to Mr Wheeler what was foremost in my mind: Would the Bank consider a second loan to the DVC, and could he help? He reacted most positively. He had known this area during World War II as a general posted in the South-East Asia war theatre, and he came to look upon it as one of the world's

P. S. Rau, I.C.S.
Adviser, PEPSU.
Chairman—



PATIALA,

November 16, 1953

I have had occasion to come into close contact with Dr. Sudhir Sen, Secretary of the Damodar Valley Corporation, in my capacity as Chairman, D. V. C. Enquiry Committee (October 1952 to June 1953). I have formed a high opinion of Dr. Sen's encyclopaedic knowledge, his grip of principles and his intimate knowledge of the problems of the Corporation. A finished scholar and a man of affairs, Dr. Sen has by his versatility and devotion to duty made the D. V. C. what it is.


(P. S. Rau),
M.A. (Exon), I.C.S.,
Adviser to the Rajpramukh,
PEPSU,
Formerly Chairman,
DVC Enquiry Committee.

June 17, 1954.

C A P I T A L**A DITCHER'S DIARY**

WEST Bengal—and for that matter, Bihar—lost a valuable servant in the departure last weekend of Dr. Sudhir Sen, Secretary of the Damodar Valley Corporation since 1948; but the business world has gained, for he leaves the DVC to become general manager of the Great Eastern Shipping Corporation in Bombay. I suppose anybody who leaves the DVC so soon after publication of the Rau report will be thought to be leaving because of it, especially since the Governments concerned have still not had the courtesy to circulate copies of the report outside Parliament. But I am letting out no secrets when I say that the investigators gave the Chief Executive Officer the best of chits and recognised, what anyone who has followed the progress of the DVC knows, that the man who deserves most credit for the success of the project to date is Dr. Sen. He was present at the very inception of the Damodar idea, for after his economic training in London and Bonn, he worked as an agricultural economist and statistician for the old Government of Bengal, and he was appointed secretary of the Damodar "Project" as far back as 1946. He then had the task of resolving the conflicts and differences between the Governments of India, Bengal and Bihar in an effort to adapt to Indian conditions the "autonomous regional agency" that has done so much good in the United States. This work took him to America, where he studied the TVA on the spot for many months, and to Russia, where he was Economic Adviser to the Indian Embassy. He has been a stalwart defender of the autonomous corporation idea in India, quite apart from the DVC, and his numerous writings on this subject have been among the freshest contributions to Indian administrative thinking—which so often in recent years has been bogged down in formalism and pedantry. The "autonomous corporation" has had no smoother a passage in India, for all that, than it had earlier in the States and in Britain, but it remains the most promising line of development for modern governments that are determined to do too much. Resistance notwithstanding, Sudhir Sen has sown a fertile seed in the Damodar Valley; may his service to the young Indian shipping industry be as fruitful.

most important regions. In his view there were probably no more than half-a-dozen areas so rich in natural resources in the whole world.

Back in Calcutta, I suggested to him to give his impressions about the DVC to the Chief Minister of West Bengal, Dr. B. C. Roy, also to tell him that the World Bank would be favourably disposed to the idea of a second loan should India decide to make such a request, which he did. My second request to him was to convey the same thought to the Finance Minister, Mr. C. D. Deshmukh, in a personal talk on his return to Delhi. This, again, he did, and confirmed it in a letter despatched from Rajbhavan where he was staying as an official guest.

Few things have given me so much joy as that warm, hand-written, personal letter from General Wheeler. I read and re-read it, and I knew then and there that the unholy siege was broken and that a second World Bank loan to the DVC was virtually assured.

And indeed, it was. Soon came Mr Deshmukh's order to the Board to prepare a loan application, which in turn ordered me to do so quickly. Needless to say I set about the work with alacrity while fully relishing the irony of the situation. Civil service management had reduced the DVC—despite its statutory autonomy—to a status where it was able to do the right things only on orders from outside!

The loan application was prepared and submitted to Delhi which promptly forwarded it to the Bank. Soon it was time for negotiations. Those who had persistently opposed the loan were the first to fly to Washington. There they performed the rituals and returned home with an \$18.5 million loan, and some bouquets.

At this point I decided to submit my resignation to the Ministry in Delhi. The second phase, which was the heart

of the project, had been piloted through treacherous shoals to a safe harbour. I therefore felt free, morally, to move elsewhere.

There were other reasons as well. Civil servants, working both inside and outside the DVC, had recreated it after its own image and had turned the "race horse" with remarkable success into a "half-mule". It was clear to me that the second-phase engineering works, now underwritten by the World Bank, would march irresistibly to conclusion while the quality of administration would sink increasingly lower.

Moreover, an Enquiry Committee appointed by the Centre had just issued its report. After an ordeal extending over several months, I received the best possible testimony I could ask for, and my stands on major policy issues were fully vindicated. But I was in no mood for an encore.

And finally, my own poverty problem had grown with the growing children, and demanded more attention. It was time to move to new pastures.

Separation from the DVC was not easy. It was a wrenching decision, but the head vetoed the heart.

A Mutilated Success

As should be clear even from this sketchy account, the DVC was involved, almost from the start, in a relentless struggle for survival. Even in a peaceful atmosphere, optimum utilisation of water and power would have been an enormous task, and would have claimed most of the Corporation's energies. Because of its continuous tussle for its own existence, these energies were diverted massively and tragically into sterile channels.

The economic and social tasks of development, Voorduin had warned, would be tough. As it happened, they were barely touched. And as a result, the DVC could realise only a tiny fraction of its vast potentials. Even then, it remains financially the most paying of India's river valley projects because of the load growth and rising power revenues.

This unholy denouement has yet another sombre aspect, though it has been studiously overlooked: Four dams cannot do the work of eight. Voorduin's plan had envisaged a design flood of 1,000,000 cusecs; Dr. A. E. Morgan wanted this to be raised at least to 1,250,000 cusecs; what has been provided for so far is barely 500,000 cusecs. Yet the people have been lulled into a false sense of security; and huge investments have been made in the Lower Valley, both in the public and the private sector, on the assumption that the existing dams already provide full protection against floods.

The plain fact is that they do not. Several medium floods have already taken place causing substantial damages on each occasion. Beyond these, there lurks perpetually the danger of a catastrophic flood, a danger that is real, not theoretical. If and when it occurs, it will inflict staggering losses running into tens of crores of rupees. Larger investments to build more dams, if only for flood insurance, remain a crying necessity.¹

India has expended vast sums of money for taming her rivers and to put their waters to productive use. But the benefits she has derived from them have been atrociously low. The main reason for this, I have long felt, is that she was unable to tackle a prior task – taming her irrigation engineers and civil servants who lacked a resource-sense and, worse still, a sense of humility to learn from others' experience what they themselves lacked.

An old old-timer wanted the DVC to be divested of irrigation, soil conservation and related work, and to settle the issue by an administrative fiat from Delhi. Reason? These were not Central subjects! Why, then, were they given to the DVC in the first place? He did not care to know. Innovation had no place in the world he lived in. Period.

I was sometimes accused of being "emotional" about the DVC. Nothing was easier for me than to plead guilty to such a charge. And today? I am even more, not less, emotional about it. For, meanwhile, the population of India has almost doubled;² the potential benefits, too,

¹ These words were written in 1972. I had sounded the same warning also earlier, especially in an article published in *The Statesman*, Calcutta on April 8, 1965. The deluge came in 1978. The damages it inflicted have been variously estimated between Rs 300 and Rs 1,000 crores.

² Written in 1974. Today it has more than doubled and threatens to treble before long.

have gone up many times, thanks to the high-yielding varieties of crops. Greater urgency and higher promise have heightened the significance of the TVA or the DVC approach.

In 1952–53, when the first blasts of the cold war reached Delhi, a senior civil servant darkly insinuated: "Member for the USA on the DVC Board!" The uncivil epithet he chose for me overlooked one thing – the validity of a scientific truth does not change with the shifting political wind.

I recalled how, before independence, the British Government had gone out of India, and out of the British empire, all the way to the TVA in quest of highgrade expertise to help tackle the Damodar problems. "If you want to build a TVA, you have to use TVA experts" – this was the assumption, and it reflected sound business judgement.

I also recalled Stalin's dictum quoted above and how Soviet Russia, under its first Five Year Plans, used Western experts, especially Americans, by thousands to implement its plans and to give on-the-job training to young Russian engineers. A striking example of this approach was the Dnieper dam where a US consulting firm (I believe it was Hugh Cooper of New York) was given the key role. In this respect the DVC came close to resemble the Dnieper project.

To me it had been an axiom – or call it an article of faith – that, once the colonial bondage was ended, free India would have to collaborate intimately with the USA in her own interest – in order to free the masses of her people, as fast as possible, from the bondage of poverty. And I acted accordingly without wavering.

Was this wrong after all? Is it more acceptable, and respectable, to learn only the hard way – when crisis

overtakes? For twice in recent years India had to backtrack, hastily and clumsily, into the axiomatic truth she had disregarded—once reeling under the Chinese invasion, again when struck by drought and famine.

True, India had no monopoly of myopia. The US foreign policy, to put it mildly, did not help. But even the best of alibis cut no ice with history. A nation must know its vital self-interest, defend it skilfully, and, even in an unfavourable setting, not surrender, but salvage it to the utmost possible extent. That is the task—the primary task—of diplomacy and statesmanship.

In the Private Sector

It was a big change—from the Chief Executive of the DVC to the General Manager of the Great Eastern Shipping Company in Bombay. This was a new company, dynamic and growing; and as adviser to its managing agents, I was involved in other activities as well. Nevertheless, the workload was a fraction of what I had been used to in the DVC. It was easier now to balance my budget, but harder to fill my time. I felt bored.

So I set out to create more work for myself, and this proved quite easy.

There was, first of all, the role of the private sector, which I could now study more intensively. And it interested me all the more since official policy was already assuming doctrinaire overtones—its main concern was how to curb and control private enterprise, not how to expand and regulate it. This did not augur well for the future. It could only hurt the economy and inhibit its growth.

Meanwhile, shipping had some specific problems of its own. After independence, more attention was paid to build up the industry, but progress was exceedingly slow. Even in the mid-fifties, the fleet was only about 500,000 GRT, and most of it plied on the coast. Of India's overseas cargo barely five per cent was carried in Indian bottoms, the rest was handled by foreign shippers. The older leaders of the industry were quite happy with a token

participation in the main conference line (Bombay-London), and was unwilling to alter this cosy arrangement. They were opposed to tramp shipping, and so India had none.

What she was unable to realise was that ocean freight is an important national resource, a major earner of foreign exchange and provider of jobs, which, if imaginatively handled, could more than pay for a sizeable fleet expansion. No Western nation in India's position, it is safe to say, would have surrendered its cargo so readily to non-nationals. But old attitudes were too slow to change.

Young Great Eastern was the first to see the opportunity, and quite ingeniously it set about building up a small fleet of tramp ships. The enterprise and skill it displayed would have brought it plaudits in another country. But in India they were frowned upon, both by the officialdom and the older shipowners.

The Company was browbeaten. Yet its action was perfectly legitimate, and was calculated to help not only its own balance sheet, but also the national interest. A fight ensued; it fell to my lot to champion the cause of tramp shipping, and in the end we won.

Apart from foreign exchange earning and job creation, shipping has another important facet, especially for a country like India, namely, marine fishery which, until very recently, was virtually neglected despite the vast resources of the Indian Ocean. Only maritime nations with a strong shipping industry excel in sea-fishing. The reason is simple—from tramp to trawler is usually but a short step.

Early in 1956, Great Eastern hit upon a clever idea. The price of Liberty ships in the world freight market was over \$500,000 a piece; its statutory price, as fixed under the US Maritime Act of 1948, was about \$250,000.

Could the USA be persuaded to sell some of the ships from its moth-ball fleet at the statutory price? Delhi liked the idea and expressed a direct interest in it. So I was shipped to Washington to explore the possibility.

In addition, I was given a side-assignment. Great Eastern had just acquired a small tanker, the first on the Indian registry. It was suitable for plying on the coast, but the Company was debarred from doing so since three oil companies had been given the exclusive right for coastal distribution of oil under long-term contracts. One of them was the US Standard Oil Company,¹ and my task was to charter out the tanker to it.

Negotiations with ESSO were held in New York at its headquarters. A five-year charter was arranged on what was considered attractive terms. Thereafter it was decided—reportedly because of these terms—that all tankers should in future be in the public sector! That efficient operation of tramps and tankers calls for a great deal of flexibility in a world of keen, often cutthroat, competition, that it can therefore be best handled by private entrepreneurs is something India has tended to overlook.

To procure Liberty ships from the moth-ball fleet at a concessional price was a far more ambitious task, and I had few illusions about it. But I launched on my lobbying effort systematically with full backing from the Indian Ambassador Mr. G. L. Mehta. After a few months, the prospects of a positive official response looked definitely good. But it ran into some new snags which could not be immediately overcome.

Several other countries, including Pakistan and Brazil, staked their claims for Liberty ships at the low statutory

¹ The other two were Caltex and Burma Shell.

price when they sensed the possibility of a favourable decision. The State Department naturally argued that, though India had sponsored the proposal and had done the necessary groundwork, the USA could not discriminate in her favour and would have to treat all the requesting countries on an equal footing, and so there would have to be some special Congressional legislation to that effect. Moreover, legislation would in any case be needed for authorisation to part with ships which were government property.

It was already May 1956. The backlog of bills in Congress was heavy. There was no chance of initiating fresh legislation until after the elections later in the year. So after several months of intensive lobbying I returned to India empty-handed—only with a letter from the State Department in my pocket. The letter expressed US agreement in principle to India's proposal and promised to take necessary action for legislation by the new Congress.

The episode had an unexpected epilogue. Early in 1957, the promised bill was introduced, by Senator Hubert H Humphrey. But within a short time the price of Liberty ships on the international market plummeted to a level below the statutory price. This knocked the bottom out of the proposal.

And while attempting to unhook Liberty ships, I was myself hooked up in the United Nations. A long-time tramp, I came in search of tramp ships and was abruptly placed on a new course. So began a new phase in tramping, this time under UN auspices, which, over a decade, took me to many places with the longest halts in New York, in Accra, Ghana, in West Guinea/West Irian, and in Belgrade, Yugoslavia.

In United Nations

1. At Headquarters

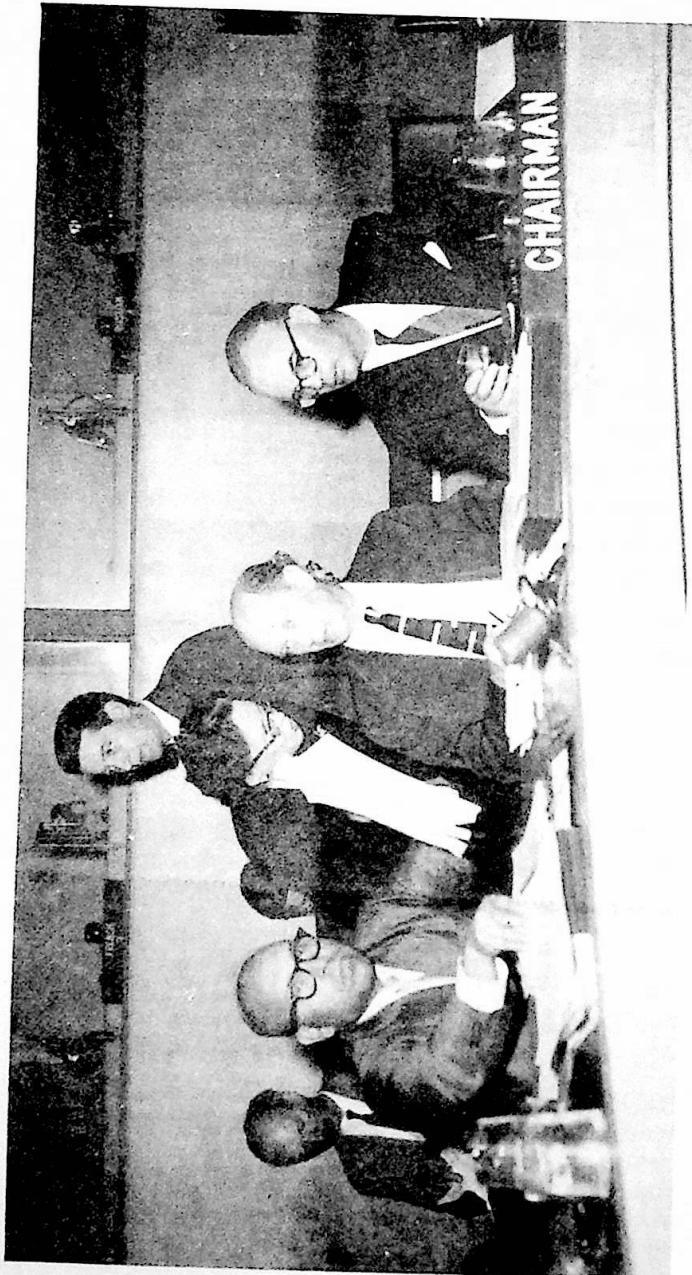
The five years (1956-61) I spent at UN headquarters, as Director of Programme Division of the Technical Assistance Board (TAB), gave me an excellent overview of the developing countries and their problems in general. And from that angle, I greatly valued this vantage point.

But I had also some shocks, and they began quite early. The so-called Expanded Programme of Technical Assistance (EPTA), of which TAB was the administrative board, was small in size – about \$25 million a year at that time – and tried to assist over one hundred countries and territories. But as I soon discovered, it could, more appropriately, be called: Technical Assistance Programme of Expanded Procedures. I marvelled at the managerial ingenuity that could spin and compress so much procedural complexities into such a tiny programme.

The inevitable result was enormous paper-processing. And I found myself caught in an endless whirl of activity that kept me busy, and dizzy, through almost all four seasons – to process more paper than projects.

Baffled by this explosion of documents, the Technical Assistance Committee, i.e., the policy-making body of

Note: The personal experience mentioned in this Chapter will help explain the background of my UN Study published in 1969. This study dealt at length with the genesis, growth and operations, and the problems of EPTA, the Special Fund which was established in 1959, and of the United Nations Development Programme (UNDP, created by a merger of the two Programmes in 1965.



*Meeting of the U.N. Technical Assistance Board. Participating as Director of Programme Division in
New York. 17 October, 1958.*

EPTA, had just prescribed an annual evaluation of its activities. And so in five years I carried out five such exercises. It was difficult for light to penetrate through the procedural jungle; nonetheless, they highlighted the paucity of performance. Even the Agencies, despite the encouragement given to them, were unable to come up with enough success stories. They quickly ran out of supply.

Yet there was so much the programme could do even with the limited resources it had at its disposal. In terms of missed opportunities—or “opportunity cost”—it struck me as the costliest programme one could imagine.

Could the procedures be overhauled, and improved? And could the programme be revitalised with a re-ordering of priorities to serve the cause of development more worthily? A start was made in that direction. I was encouraged, but only to discover that it was all an idle exercise. The procedural jungle was not an accident, as I had naively assumed. There were strong, vested interests in the status quo.

2. In Ghana

From New York to Accra was a radical change. It involved a good deal of adjustment, both physical and mental, but it had also enough compensation. For one thing, it emancipated me from the tyranny of paper-processing, put me back close to the real problems of development, and gave me time for reflection. For another I had, as Resident Representative of TAB and Director of Special Fund, more elbow-room to do some real country-programming.

Moreover, the personal rapport I was able to establish with President Kwame Nkruma was a great help. I was able to promote several new projects, some of which were financed from Ghana's own resources. From the start I

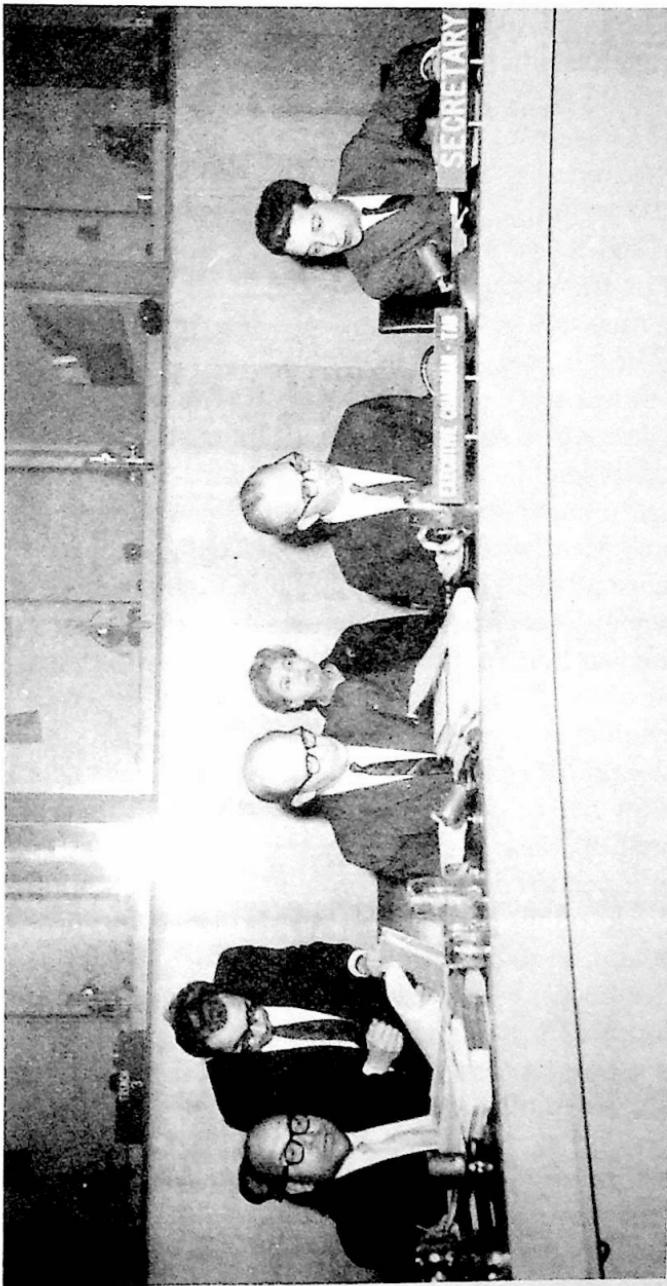
set out to interest the President, above all, in one thing: systematic use of Ghana's land resources, including the savanna-grass areas, and, therefore, in the development of irrigation wherever possible, diversification of the cocoa economy with other crops, a livestock industry to produce meat and milk, a milk supply centre for Accra, also fishery development in the Volta reservoir then under construction.

I vividly recall how intently he listened to me, at times asking me to speak more slowly so that he could take down notes, and how he followed up my suggestions, almost all of them, in actual practice. My relationship with him became easy, even friendly. Sometimes he asked me to draft letters for him to facilitate follow-up actions which I readily complied with.

My concern, needless to say, was exclusively with development, which is a non-political job, and I carefully steered clear of political shoals, of which there were quite a few. This line of demarcation, though rather fine, did not pose much problem for me. For, I have always assumed that it is the duty of a public servant to try and persuade those who have the political authority to use it for the benefit of the people, whether persuasion succeeds or fails. My own experience shows that the outcome, surprisingly often, can be positive—provided the task is pursued with facts, logic, convictions, and tenacity. And it also shows that too many of us in too many cases tend to give up the cause too soon.

3. With UNTEA

All this was confirmed, once again, in West New Guinea/West Irian where I was transferred, almost overnight, by the Acting Secretary-General U Thant to serve



*Meeting of the U.N. Technical Assistance Board. Participating as Director of Programme Division in
New York, 23 March, 1959.*

as the Deputy Administrator of the United Nations Temporary Executive Authority (UNTEA). Two examples will illustrate the point, both of which gave me much personal satisfaction.

The Netherlands Government was willing to contribute \$10 million for the development of West New Guinea, and it also made an official declaration to that effect. But the Indonesian authorities were highly distrustful; they saw in it political strings, a device to maintain the Dutch hold on the territory.

Two things were quite clear to me. The Netherlands had no desire to stage a comeback—their offer was genuine, possibly made, as some had suggested, in a mood of expiation to make amends at least for some of their past omissions. Meanwhile, the people of West Irian would dearly need all the money, and much more, for their own development, especially since Indonesia, after the severe strain the war had imposed on her, had very little to spare for them.

The conflict pointed up the need for finding a formula which would overcome Indonesia's distrust and make it possible for her to accept and utilize the Dutch offer for the benefit of West Irian. And the best, if not the only, formula, it occurred to me, would be to establish a Fund directly under the Secretary-General for West Irian's development, initially with the \$10 million to be donated by the Netherlands but inviting other countries, including Indonesia, to make voluntary contributions to it.

As a first step, I took it up with the Dutch Ambassador to the UN. He immediately saw the logic, liked the idea in principle, and agreed to pursue it with his Government. This positive response, though tentative, was a definite encouragement, and it eased the next and much more delicate task—persuading Indonesia. Once the groundwork was done sufficiently on both fronts, I made a



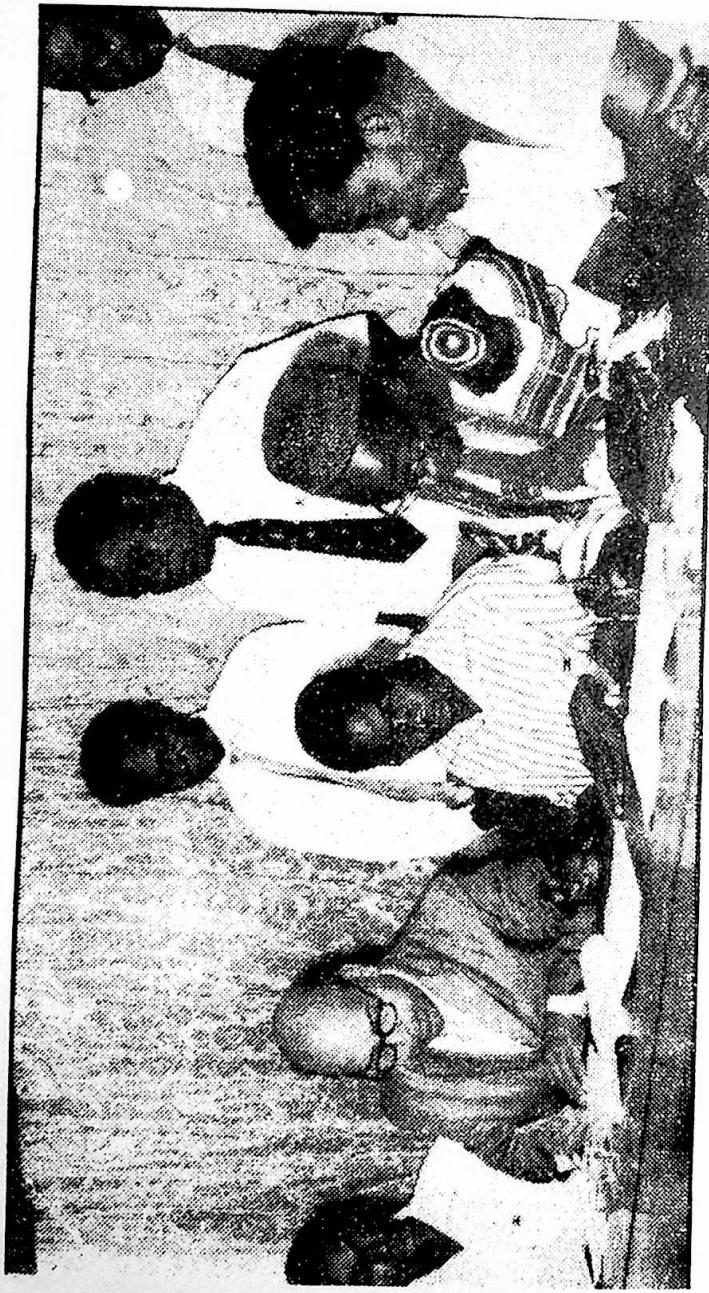
Pan American

EXPERT HERE—Sudhir Sen of India, program director of the United Nations Technical Assistance Board, arrived Sunday via Pan American for two weeks at the East-West Center. He will review the Center's technical training operation and make recommendations for expansion.

The Honolulu Advertiser

16 May 1961

On arrival at Honolulu as a Consultant to the newly established East-West Center. 16 May 1961.



"DAILY GRAPHIC, 29 September 1962."

Signing a Land Survey Agreement with Ghana on behalf of the United Nations, 29 September 1962.



*Sudhir Sen on the Volta while visiting the Volta
Hydro-electric Project in 1962.*

demarche to Jakarta, in December 1962, to discuss the proposal with the Indonesian authorities.

The high point of my Jakarta visit was a personal meeting with the then Foreign Minister, Dr Subandrio. I put the case to him as persuasively as possible, stressing that both Indonesia and West Irian had a great deal to gain, and nothing to lose, by accepting the suggested proposal. It worked, and I left Jakarta well convinced that it was only a question of time before a Special Fund for West Irian was established with full agreement of both parties, along with restoration of diplomatic relations between them.

The agreement came at the end of April 1963, just on the eve of West Irian's transfer from UNTEA to Indonesia. And it led finally to the establishment of the "Fund of the United Nations for the Development of West Irian", or FUNDWI. It remained in abeyance when Indonesia broke with the UN. After her comeback to the UN family, the Fund began its operations in right earnest with a sum of \$30 million contributed by the Netherlands, Indonesia, USA and several other countries.

The second example is no less interesting. UNTEA was set up only for about nine months; its primary task was to effect a smooth transfer of the territory from the Netherlands to Indonesia; the General Assembly Resolution had laid down a firm date for the formal transfer, which was 1 May 1963.

But Indonesia was unwilling to wait so long, and wanted the date to be advanced, preferably to 1 January 1963. To lend weight to this demand, demonstrations were held by the local people in Hollandia and other places, which, however, bore the hallmarks of well-organized spontaneity. Some within UNTEA began to waver; they doubted if it could really hold the front until



Participating at a conference as Deputy Administrator with Dr. Djalal Abdoh, Administrator, United Nations Temporary Executive Authority (UNTEA) in Hollandia, West New Guinea/West Irian. 12 January, 1963.

the target date. There were even talks of advising the Headquarters to take steps to modify the GA Resolution to accommodate an earlier date of transfer!

But how could the UN yield to arbitrary pressure? Why should the GA agree to amend its resolution in such conditions? And how could it do so on such short notice? The whole idea looked absurd. Clearly, we had to stay on for our full term despite pressures. Also we had to find some ways and means to defuse the issues that generated them.

As it happened, Indonesia's stand was not all that unreasonable; it had some valid points as well. The Dutch were leaving and were, therefore, winding down their business, so ran the argument; the construction work was shrinking; in several places unemployment was growing as a result; and people were getting increasingly more restive. Meanwhile, UNTEA was there only for the transitional stage; a bird of passage, and with no stake in the future of the territory, it was unable to take a longer-term view of things. Its holding operation was actually holding up advance planning for its future development.

Obviously, there was force in this reasoning which could not be ignored. The contention had to be met fairly and squarely. And so during my Jakarta visit I submitted my own solution to Dr. Subandrio. There could be absolutely no question of UNTEA quitting before its term was over, I emphasized. But it also fully recognized that it had a duty to do all it could to meet both the short- and the long-term needs of West Irian. Could he, therefore, choose a senior Indonesian economist—one in whom he and his Government had the fullest confidence—and assign him as Adviser to UNTEA? If this were agreed to, I would in my turn be glad to attach him to my office and to work personally with him to tackle the immediate

problems and also to draw up a longer-range plan for West Irian.

Dr. Subandrio agreed, and within a fortnight Minister-Counsellor Dr. Ismail, hurriedly recalled from the Indonesian Embassy in London, arrived in Hollandia to serve as Economic Adviser. From then on we worked together as a team on West Irian's problems right through the rest of the UNTEA period. There were no more demonstrations, spontaneous or otherwise.

At the end of my assignment I was able to submit to the UN a plan for the development of West Irian indicating, in broad outline, the immediate tasks and the stages in which one could best help this territory in its transition from the stone age to civilization.

4. In Yugoslavia

From West Irian I returned to New York and after a few months, was reassigned to the field – this time as UNDP Representative to Yugoslavia. This was, in effect, a move from the world's least developed territory to one of the most advanced of its less-developed countries. Programming, too, had to be varied accordingly. Yugoslavia called for a high degree of sophistication, both economic and political.

The main story of the reprogramming exercise I undertook in Yugoslavia has been told elsewhere in cold, factual terms.¹ It would be worth shedding some light on its human aspects. For, needless to say, things did not happen of themselves; once again, they needed much home work and a great deal of high level discussion and persuasion.

¹ In my UN study – see below.

Should Yugoslavia at all receive UNDP's assistance when resources were limited, and when there were so many needy nations to serve? The question cropped up time and again. Many in New York—and even in Yugoslavia—thought it was time to wind up the programme. This struck me as a superficial view. The UNDP could still play an important role to strengthen the Yugoslav economy, which would, in turn, help strengthen also the UNDP.

The plea I developed, and used with the Yugoslav authorities, especially after my first year, was a simple one: Their country had made tremendous strides since World War II; it was impossible not to be impressed by their achievements. They had battled for development as gallantly as they had fought earlier, as Partisans, against Hitler's army. The post-war period—the Partisan Phase, as it were, of their economic development—was now coming to an end. It was time for stocktaking, consolidation, and a less-generalized approach, for well-planned specific actions to attain well-defined targets.

Quite naturally, the earlier phase when the issue was struggle for survival, had left behind several gaps or weak spots; and some of them would, almost certainly, prove critical for future growth. It was essential, then, to review the entire field, to identify the gaps and weak spots, and to take appropriate measures to fill or reinforce them. Such action would enormously strengthen the whole economy, and would produce large multiplier effects escalating the benefits from both past and future investments.

No one could take exception to this preamble. For, everybody knew that it all too accurately characterized the situation. The reference to the Partisan Phase brought back fond memories of hard days, especially after the breach with Stalin, and almost always it evoked a

pleasant laughter. My plea was readily accepted in all the six Republics which I visited one after another.

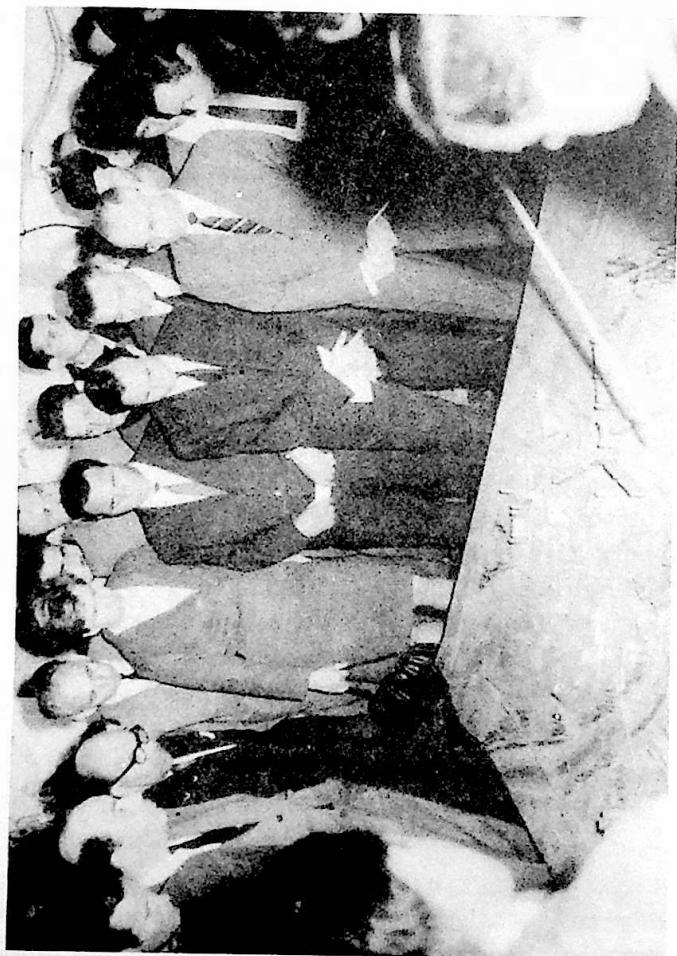
This led up to what might be called a "gap-filling programme." It is here that the UNDP's contribution could be most valuable. Two things followed from this hypothesis: First, it was going to be a kind of terminal programme—once the gaps were filled, there should be little or no need for assistance. And second, to achieve the best and quickest results, the whole programme, as far as feasible, had to be pursued simultaneously—somewhat like grouting on a dam to plug holes and strengthen the foundation. The entire operation could be compressed within a brief time-span, say, of six years.

What, then, were the specific areas that deserved, or demanded, immediate attention? The *first* was easy to spot—*seismology and earthquake engineering*.

Skopje, the capital of Macedonia, had been razed to the ground by an earthquake, on 26 July 1963. The Government was determined to rebuild the city, and this was going to require a lot of capital—the estimate came up to \$750 million spread over some fifteen years or so.

Building a new city at such great cost in a highly seismic area was a risky enterprise. And Yugoslavia, despite all the strides it had made after World War II, was clearly not yet up to the mark in seismology and earthquake engineering. Here was an area where the UNDP could render a great service. But would the Yugoslav engineers be objective enough to see, and admit, their own deficiency? Would the Government ask for outside assistance? And if it did, would the UNDP respond with understanding?

To set the perspective right in a matter like this was most important; luckily, it was also easy: No one could blame Yugoslavia for not having suffered more Skopje-



Rebuilding of Skopje. Watching the Project for the City Centre prepared by the Japanese architect Kenzo Tange. 1965.

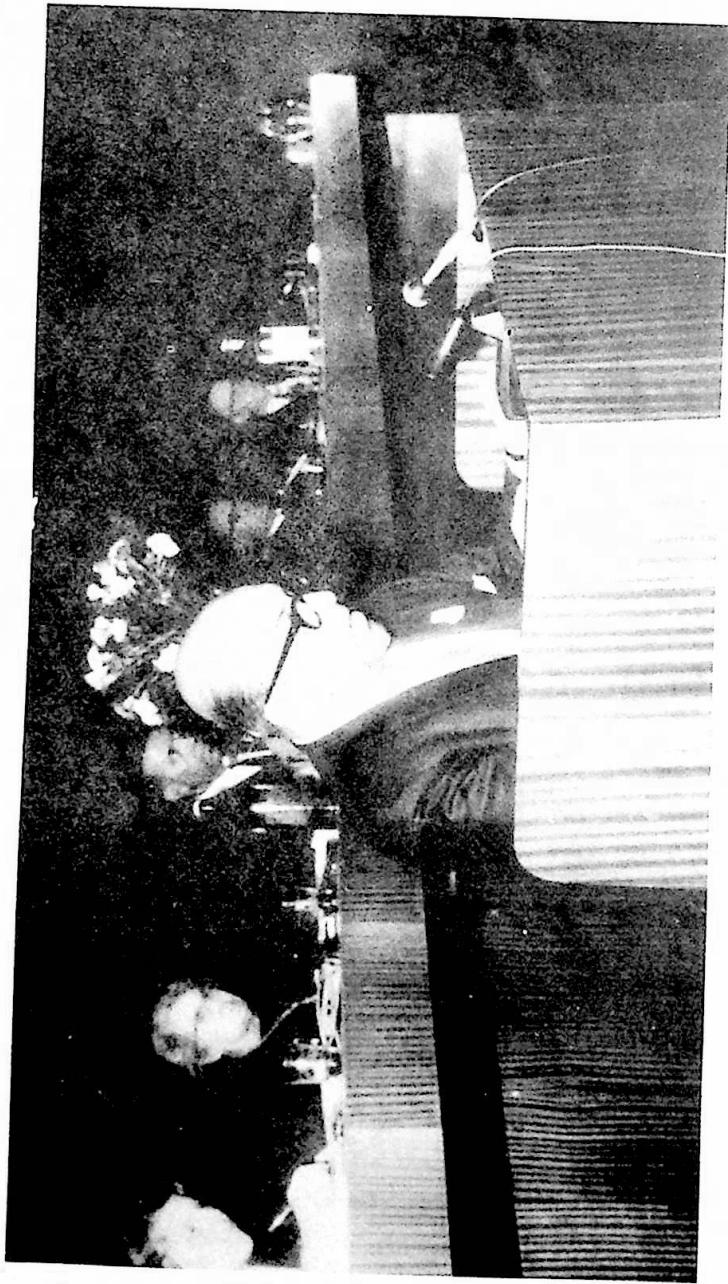
like disasters; this explained its lagging progress in a super-technical field like seismology and earthquake engineering; Skopje offered the best chance to catch up with others. On the technical side, a two-man UN mission—a Frenchman and a Russian—rendered much valuable help. After a while a positive response emerged from all concerned.

A Special Fund project was assured for preparing the Master Plan for Skopje. But who would head it up as Project Manager, the kingpin on which would hinge the fate of the project? Obviously, it had to be a fool-proof selection. Good luck and a three-front approach—with the Yugoslav Government, the Polish Ambassador in Belgrade, and the UN—led to the recruitment of Mr. Adolf Ciborowski, of Polish nationality, who, as Chief Architect, had been responsible for the reconstruction of Warsaw after World War II.

Given the magnitude and the complexity of the project, I felt the need for adding another component to it—an International Board of Consultants consisting of top-ranking seismologists and earthquake engineers. Again, this needed some special pleading: the Government saw the advantages and agreed; and a Board was set up with about a dozen experts drawn from different countries, including Japan, USSR, Czechoslovakia, France, Britain, USA, and, of course, Yugoslavia. If the Skopje project has been an outstanding success and a monument to UN-Yugoslav cooperation, it has been due, above all, to its outstanding Project Manager and International Board of Consultants.

But preparing the Master Plan was not enough; it would have to be implemented. This called for skilled local workers, and the skills they needed included a specialized one—for antiseismic construction. A second

Rebuilding of Skopje. Presentation by Dr. Sudhir Sen, 1965.



UNDP project was, therefore, developed for specialized training of the building trades personnel. In this case the Yugoslavs saw the need more quickly than the UNDP. However, it was approved after some footdragging, with the ILO as the Executing Agency.

There had to be a third and immediately related project—control of the river Vardar which flowed through the city. A flood preceding the 1963 earthquake had undermined the foundations of many buildings, aggravated the seismicity, and thereby escalated the damages. It was essential to forestall a repetition of such experience and to protect the new city against future floods. And so regulation of the Vardar River became the third Special Fund project.

Finally, an Institute of Seismology and Earthquake Engineering was established, with technical assistance from the UNDP, to meet the longer-range needs of this seismic region—of Macedonia and Yugoslavia, and the Balkans extending to Turkey, and beyond. For, clearly, future earthquakes would hit not just mud huts and paddy fields, but many capital-intensive structures that were coming up fast. The function of the Institute was to look ahead, to conduct research and studies, and to devise effective means to minimize the impact of future shocks.

The *second* priority area was no less clear to me—*river valley development*. This is particularly important in a country like Yugoslavia which consists so largely of mountains and rivers. There had been some development of hydro power, mainly on a piecemeal basis. The rivers had received no systematic attention; floods were frequent; flood damages were rising; large tracts of potentially arable land lay idle because of periodic inundation and of a chronic under-emphasis on agriculture common



Rebuilding of Skopje. Messrs. Sen, Weissmann, Ciborowski and Ambrosey in discussion, 1965.



Rebuilding of Skopje. Dr. Sudhir Sen speaks at the last meeting of the International Board of Consultants, 1966.

to all "socialist" countries. Would it be possible to rectify this glaring omission? It was certainly worth a try.

A Special Fund/FAO land reclamation project had been under way for some time at the mouth of the Neretva. Hastily contrived and cost-callous, it was, if anything, an example of how not to plan a project. It could not promote the cause of resource development and better land-use.

The Vardar project, introduced as part of the Skopje package, was more comprehensive, also more promising in the long run. But its main focus was on protecting the city, not on utilization of its economic potential. In addition, it also had another complication — agreement with the Government of Greece was necessary for a source-to-mouth treatment of the Vardar since, in its lower stretches, it flows through Greek territory.

What Yugoslavia clearly needed was a demonstration of TVA-type development on one of her most promising "problem rivers". The ideal river to tackle for this purpose was the Sava, the largest tributary of the Danube. And the ideal opportunity for this came when, in 1965, a severe flood spread havoc in its upper reaches and carried it right into the heart of Zogreb.

I immediately seized the opportunity, and secured the agreement of all concerned to an emergency mission of two consultants to be assigned under joint UN/FAO auspices to draw up the outline of a blueprint for comprehensive development of the Sava Basin, including flood control, power generation, navigation, and land reclamation. The mission, consisting of two US consultants, carried out a quick reconnaissance survey and, within a couple of months, submitted its report with concrete recommendations.

The greatest economic potential in this case lay in land development. Between Belgrade and Zagreb there was a large area of half a million hectares—say, 1.25 million acres, mostly lying idle because it was periodically subject to shallow flooding. This whole area could be reclaimed at a relatively low cost, and put to productive use, especially to raise high-grade beef cattle, as borne out by the presence of such cattle in the narrow, flood-immune zone at higher elevations. And there was a large and growing market for the product in beef-hungry West Europe. All in all, it looked like a gold mine, long neglected and waiting for systematic development.

The mission's report led to the formulation of a Special Fund project which was duly put through the usual mill. Before long Yugoslavs began to talk of their TVA with some pride. But on the way to its operational phase it suffered a rude setback, as explained later.

A similar approach was applied, in 1966, also to the Morava, the second largest tributary of the Danube. A heavy flood occurred that year causing extensive damage; a UN mission was invited to give a technical and economic appraisal of a full-scale development of the Morava. Its report evoked much interest. However, no follow-up work on it was possible before my day of departure arrived.

Could Yugoslavia afford so many river valley projects? There was no doubt in my mind on this score—it must, ultimately, develop the full potential of all its river systems on a basin-wide basis. The work must, of course, be properly phased, and so also the investments. However, it takes several years to carry out the studies and prepare the preliminary engineering blueprints; and the more carefully they are done in advance, the more efficient are

likely to be the final results, with considerable savings in capital costs. My advice to the Yugoslav authorities was, therefore, to put the Morava in the engineering pipe-line while going ahead with the execution of the Sava project. They saw the advantages of such an approach and was, in principle, ready to act accordingly.

The *third* area I identified for high-priority treatment was related to the second, namely: *forestry development* – for erosion and flood control, and to build up and utilize the timber resources. For a start, I suggested a project in the Republic of Bosnia-Herzegovina.

I recall a lunch meeting at Sarajevo with Ministers and senior officials. In the course of our discussion I specified three causes which had heavily told on Yugoslavia's forests: uncontrolled grazing by goats, destruction by Hitler's army during World War II to deny hiding places to the partisans, and frantic felling of trees for export after Yugoslavia's break with Stalin when, for sheer survival, timber was treated as foreign exchange.

A Minister fully agreed, but to goats, Hitler and Stalin he wanted to add one more: "Our own capitalists." He referred to the numerous enterprises which wantonly depleted the forests to improve their own balance sheets.

There was no question about the need, nor about the big contribution scientific development and management of forests could make to the Yugoslav economy. A five-member mission of internationally known experts was organized and assigned under FAO auspices, to study the problems and to draw up a realistic plan. The recommendations it made led to a Special Fund Project which should, in due course, pay a rich dividend.

Similar initiative is needed in several other areas of Yugoslavia, especially Montenegro. Since forests require a long time to grow, the sooner it is taken, the better.

My fourth area was development of *tourism*, and, related to it, *regional planning of the Adriatic coast*. The tide of tourists was rising; it was, in many ways, the quickest means of augmenting the country's foreign exchange earnings; but the available facilities were totally inadequate; expert planning was needed to tackle both immediate and longer-range problems.

Two broadbased missions, with experts drawn from Europe and the USA, visited Yugoslavia, extensively toured the country, and made a series of specific recommendations.

Meanwhile, the flood of tourists to the Adriatic coast, the great touristic asset of Yugoslavia, posed an alarming problem. Different Republics, communes, and enterprises were going their own way with piecemeal development, setting up facilities haphazardly with an eye to their earnings, and with no eye to the need to preserve and improve the precious assets, in particular the historical monuments and the scenic beauty. The trend, if unchecked, was soon going to turn the Adriatic coast into a rich, but ugly slum for tourists.

These considerations impelled me to take the initiative to develop a regional planning project for the South Adriatic Coast, and it was pushed through despite several roadblocks. By then, the Skopje urban planning project was completed, and Mr Ciborowski was placed on the Adriatic Coast project to pilot it as Project Manager. The successful example he set up here led, a few years later, to a second UNDP project for the same kind of planning for the northern part of the Adriatic coast.

I had two other areas in mind, both extremely important in my judgement, but both ideologically sensitive, and so I decided to approach them gently with a good deal of circumspection, leaving them mainly to time and

the Yugoslavs themselves. The two areas were *agriculture* and *industrial management*.

Yugoslavia's agriculture had, and still has, enormous unutilized potential with a vast market in the increasingly affluent West Europe, and with what one may call an expanding "export market within the country", thanks to the upsurge in tourism. Yet because of its Marxian moorings, it had suffered from a chronic undervaluation as a booster of GNP and living standards. After the war Yugoslavia had first collectivized many of its farms and then decollectivized them, but had left the individual farmers in a twilight zone—without firm guidelines about the future and, therefore, without enough incentives, inputs, facilities and services.

A green revolution is yet to come to Yugoslavia. And it will come when the prevailing uncertainties and deficiencies are removed. Meanwhile, the best course, it appeared to me, would be to concentrate efforts on three related, but noncontroversial areas: reclamation and utilization of large tracts of potentially fertile land, rehabilitation and better management of forests, and inland fishery development for which the lakes and rivers offer large scope. With the help of an FAO expert, some steps were taken to give a new impetus to fresh-water fisheries.

As for the rest, the best catalytic agent, I was inclined to assume, would be—time. The growing demand-pull, I hoped, would impel Yugoslavia's agriculture towards higher levels of productivity. Also, the examples of others, especially of her three neighbours—Italy, Switzerland and Austria—would reinforce this trend and bring about the right kind of reorientation.

Industrial management, too, posed somewhat similar problems. How to combine it with Marxian tenets and the peculiarly Yugoslav doctrine of workers' councils was a

question that admitted of no easy answer. However, on the positive side some factors were already at work: the widespread realization that, as a rule, the enterprises were not managed well enough; that their reliance on heavy Government subsidies was self-defeating; that they had to be more efficient and competitive—for a great many of them were dependent on the export market so that their ability to compete with foreign firms would determine their viability.

What, then, could be done? The United Nations Industrial Development Organization (UNIDO) had just been established. Could it assign some high-level consultants to demonstrate the techniques of improved management in a few enterprises selected by the Government?

UNIDO's response was enthusiastic. An opening for its own business in Yugoslavia seemed almost too good to be true. The response was quick—and unimaginative. It showed no understanding of the peculiar needs of Yugoslavia. It assigned an expert at a level that could cut no ice with the quality-conscious Yugoslavs. The attempt was still-born.

Could there be any doubt, after the examples given above, that the UNDP could still play a very useful role in Yugoslavia? No, not in Yugoslav minds. There was also better appreciation of how and where it could help, and of the nature of that help—not as the purveyor of a small amount of foreign exchange, but as a promoter, persuader, and catalyst, at times to pave the way to a unified approach smoothing rivalries among enterprises, communes and Republics.

In my many adventures with development the hardest thing I found was to persuade my bureaucratic masters—with hardened arteries and closed minds. The

UN has been no exception. One example, relating to the Sava project, should be enough to illustrate the point.

FAO wanted to be the Executing Agent for the whole project and refused "to play second fiddle to UN," as a senior officer of the Agency put it. And UN, in its turn, could not agree to such a proposition. What did the UNDP do? It made two projects out of the Sava for UN and FAO respectively; approved the flood control part and shelved the rest, that is, by far the most productive part of Sava development. The engine was signalled, as it were, to depart—leaving behind the passenger and freight cars! The FAO part of the project was ultimately approved; but when it will begin to show tangible results is not known.

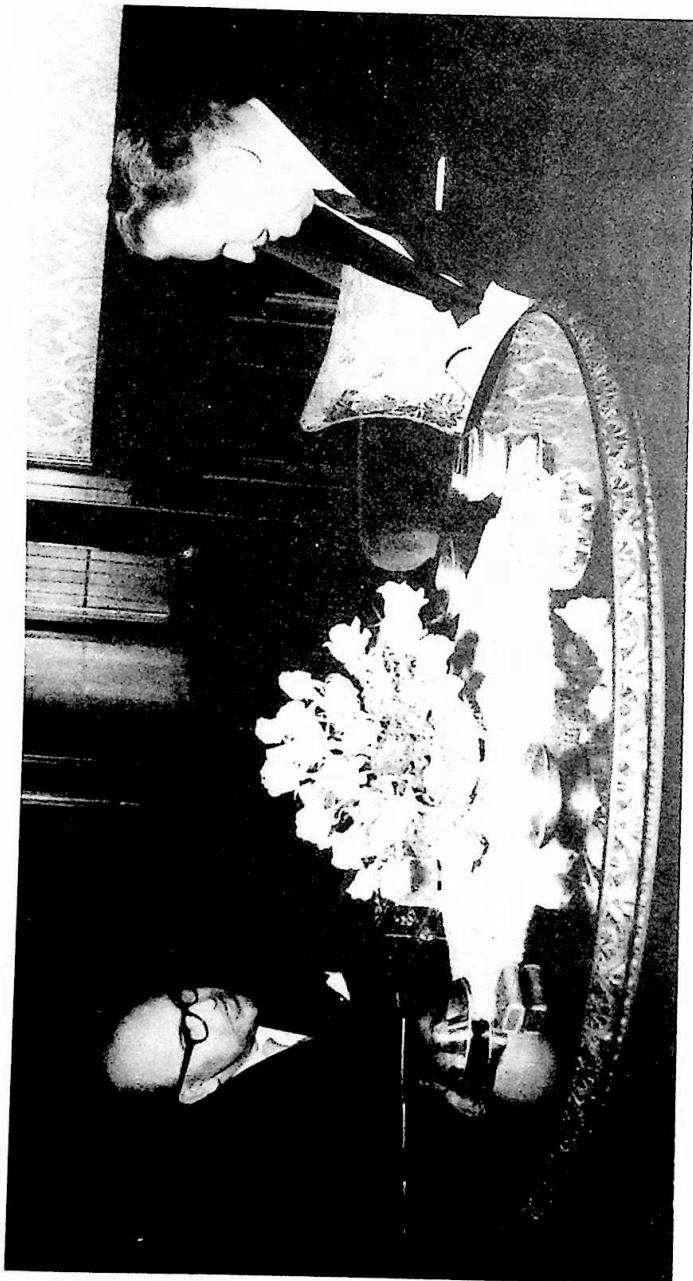
Or, take the case of the project manager. I had put in a strong plea, somewhat sticking out my neck, that, in this particular case and purely in the interest of this important project, my personal recommendation would be to get a competent engineer from the USA with long experience in TVA-type of development, provided, of course, his was considered *politically feasible*, an issue which only the Yugoslav authorities could decide. They liked my idea and agreed to it in principle for the sake of their own TVA, subject to the clearance of the particular candidate when nominated.

But my plea made no dent in the UNDP. There were surplus roubles to spend, and so it was decided to recruit the Project Manager from the rouble land! As an example of the puny tail wagging a giant dog it was indeed hard to beat.

Similarly, my thesis of a terminal programme—with a bunch of projects launched simultaneously as "foundation-grouting" in the Yugoslav economy and financed largely from domestic resources—was too novel to be given a serious hearing. The UNDP was unwilling to



President Tito receives Dr. Sudhir Sen on 23 November, 1966.



*President Tito discusses United Nations activities in Yugoslavia, especially reconstruction of Skopje and
Sava development project, 23 November 1966.*

DRŽAVNI SEKRETARIJAT
ZA INOSTRANE POSLOVE

Beograd, 24.XI.1966.

Sef Protokola

Dear Mr. Sen,

On the occasion of your
leaving Yugoslavia, I take pleasure in
addressing you in the following matter:

As you will know, a proposal
has been made to the effect that a high
yugoslav decoration be conferred on you
in recognition of your merits in dis-
charging your mission in Yugoslavia.

In connection with this
I should appreciate if you would
confirm readiness to receive the
yugoslav decoration.

Sincerely yours,

Lazar Lakić

Mr. Sudhir Sen,
Representative of the
United Nations Technical
Assistance Board and Spe-
cial Fund,

Beograd

deviate from its standard procedure of spreading the projects over time—not even for “deviationist” Yugoslavia.¹

Yet how fascinating were some of the longer-range possibilities one could contemplate! Sava-Morava development, if properly carried out, could open up new horizons—it might prepare the ground for tackling, some day, even the great Danube through a joint, multi-national effort among all the riparian countries drained by it.

Meanwhile, the Ambassadors of Bulgaria, Romania, Hungary and Poland were following the UNDP's activities with increasing interest. And they began to ask me if similar programmes could be developed also in their own countries. Clearly, Yugoslavia's example had begun to produce spillover effects.

This illustrated once again the oft-overlooked truth—that resource development, when pursued on a non-political and non-ideological basis, can bring nations together and help build bridges among them. And what could be more relevant to the UN's own ideals than such a development which, steering clear of dogmas and ideologies, would help lead mankind back to its “common moorings”, both materially and spiritually?

My work in Yugoslavia aroused these tantalizing thoughts. But I also knew very well that they were out of place in Headquarters where projects were counted, not weighed; progress was measured in terms of dollars

¹ In order not to impose an undue burden on the UNDP I pursued a twofold approach: first, to increase Yugoslavia's annual contribution to the UNDP—this was agreed to, and the contribution was raised by 100 percent in two successive stages; and second, to finance a group of half-a-dozen Special Fund projects mainly from their own resources on a fund-in-trust basis, and this, too, met with a generally favourable response.

spent, not results achieved; programming was conceived primarily in money terms, divorced from a sense of priorities; where too few cared to dream, and too many were defiantly satisfied with mediocre performance. But I was unwilling to surrender my right to dream.

After three crowded years I decided to leave. The Yugoslavs were surprised; some wondered if I could be persuaded to stay on. But, by then, the spirit of the ecclesiastes about season and time had gripped my mind, and I felt: There's a time to work and a time to reflect; a time to stay and a time to go. And the feeling was growing on me that it was time to go.

On 23 November 1966, President Tito received me in his Belgrade residence in what was a farewell meeting. "You have done a lot for our country," he said, and thanked me for it. The 45-minute discussion ranged over a fairly wide field, and covered in particular the UNDP's work in Yugoslavia with a review of the major projects then under way or in view. It was gratifying to find the President not only well informed, but also well disposed to the UNDP programme. He expressed a very strong interest in the Sava development which involved four Republics. Little did we know at that time that Headquarters was getting ready to perform a senseless surgery on it.

As a final gesture, the Government wanted to confer "a high decoration" on me. As a UN civil servant, I declined politely, and reported the matter to Headquarters. Since then I have treasured this gesture along with the anguished thought that I could not better serve the country—and the United Nations—not because light was lacking in the field, but because it shone too dimly in the UN precincts.

At Brown University

My move from Belgrade to Brown was due to an accident. One morning, in 1966, the office mail brought a deceptive-looking letter about some fellowship. At first I took no notice of it—believing it related to one of the numerous, UNDP-awarded fellowships to Yugoslavs. Later, on closer look, it turned out to be quite different. It had nothing to do with the UN programmes, and its target was—myself.

In sum, the Sociology Department of Brown University wanted to know if I would be interested in a visiting professorship to be financed with a Senior Foreign Scientist Fellowship from the National Science Foundation of Washington, D.C.

The query evoked trains of thought I had indulged in for some time, such as: I had been long enough with the UN; perhaps I had reached a stage where I could serve the cause of development, if at all, better from outside. Also, I had, long enough, been a slave of others; at last I could be free—to be my own.

The two years at Brown gave me the kind of break I was craving for—the quiet of the university life, time to study and reflect, the welcome task to conduct a seminar on “Population Growth and Economic Development”, the subject I was most concerned with, stimulating discussions with a small group of able graduate students, and rewarding association with friendly colleagues. Along with these I had the leisure—and the freedom—to plan and work on a three-part study on economic development.

Why a Trilogy

The underlying idea was to examine, in turn, the roles of the three parties involved in development—donors, receivers, and administrators of aid. And having just spent over a decade with the UN family, I could not help but turn to it in the first place—to give a critical analysis of the kind of job it was doing as an aid-administering agency placed between the aid-givers and the aid-receivers, and how and where its performance could be improved.

That there was, and still is, a vast scope—and a desperate need—for such improvement not even the most zealous devotee of the UN can deny, at least in his objective moments. The besetting weaknesses of its programmes are three: they are not production-oriented; they are indifferent to—if not callous about—priorities; they show no understanding of the principle of complementarities.

The result is, to plagiarize one of my own chapter titles: "Low yield from high ideals." The losers are not only the developing countries, but also the UN itself.

For, the developing countries have been denied the enlightened leadership which they have a right to expect from the UN to lead them—by the shortest and quickest route—to a better life. As a result, their progress has suffered cruelly.

As for the UN, its failure to grab this leadership firmly and imaginatively has deprived it of what could have

been a powerful instrument to strengthen its own foundations, to build up its moral prestige, and thereby to improve its prospects of tackling some of the more intractable political problems, despite the rifts of ideologies and the chill of a cold war. The UN, in that case, may not have been as impotent as it is today.

The first study was completed while I was still at Brown University.¹

The second part of the trilogy looks at the problems from the field, the angle of the recipient countries. It is concerned, above all, with the question of how to plan and implement high-quality country programmes to secure the best possible use of both domestic and external resources, and thereby to make the maximum possible contribution to raise the living standards of the masses of people. This leads right to the heart of the question of priorities.

A well-conceived country-programme, I had long been persuaded, must have agriculture as its hard core. This conviction has been greatly reinforced by two more recent phenomena – an accelerating demographic revolution and the advent of a green revolution. One poses a grave threat to man's future, the other gives him the best tool to combat it with. The population explosion multiplies the demand for food; the yield explosion in tropical agriculture offers the best, and only, hope to produce enough food in time to cope with it.

Not only that; an accelerating green revolution – provided its benefits are not confined to a few, but are diffused widely and wisely among the people – can help

¹ It was published under the title: *United Nations in Economic Development—Need for a New Strategy*, Oceana Publications, Dobbs Ferry, N.Y., 1969.

dampen population growth far beyond what even the best family planning programme can, by itself, achieve in a developing country.

How to make the green revolution a success—this is the question the second study is concerned with and examines in all its ramifications. This is also the foremost question all development planning worth its salt must be concerned with today. For, if the green revolution succeeds, a great many other things will automatically fall into their proper places and will lift a whole economy to a far higher level of development. If it fails, it will not only drag down everything else, but will put a nation's very existence in jeopardy. The reward for success is extraordinarily high, so is also the penalty for failure.

Much of the study has been devoted to India—the country I belong to and know best, also a country which contains one-sixth of humanity, where problems are vast, complex and acute, where in fact the awesome drama of food-and-population race has entered the climactic phase. If the poverty problem can be solved in India, as I believe it still can, it can certainly be solved in most other countries within a reasonable time. These countries can greatly benefit from India's experience and learn what must be done as well as what not to do.

After independence, India was faced with quite unique problems—both in dimensions and in complexity—as no knowledgeable person will deny. And these have been complicated by two other factors: demographic pressures and democratic antics. To crown it all, history gave India no time for experimenting, no elbow-room even for normal human error.

Yet errors have been made, plenty of them, and some grave ones too. They sprang largely from dogmas and misconceptions—whether inherited from history, or

hastily borrowed from abroad, or cultivated in India's lush emotional climate. The result has been a dangerously slow rate of progress at a time of exploding population, which now threatens to perpetuate poverty of the worst kind for all time to come.

The work has unavoidably grown in size. For, in order to develop its main thesis it became necessary also to examine the validity, or otherwise, of policies and ideas, often in historical perspective—not only to take a hard look at the trees and the forest, but also to clear a fair amount of jungle into the bargain. It has, therefore, been divided into two separate but related studies titled respectively:

1. *A Richer Harvest—New Horizons for Developing Countries; and*
2. *Reaping the Green Revolution—Food and Jobs for All.**

Dwarf wheat, miracle rice, and other high-yielding varieties of crops have opened up revolutionary possibilities; yet, by themselves, they can do very little. They must be cultivated with meticulous care according to prescribed practices with the needed inputs, and they must be backed by a broad spectrum of services and facilities. Only then can they produce a richer harvest. The problems and opportunities associated with them comprise the main field the first of the two studies is focussed on.

But even a *richer harvest* will not be enough; it has to be the *richest possible*, especially in a country like India. Her arable land is now virtually static, around 350 million acres. Every acre of this land will have to work much harder to produce all the food and fibre needed to support

* They were jointly published by Orbis Books, Maryknoll, New York and Tata McGraw Hill, New Delhi.

her soaring population—350 million in 1951, 550 million in 1971, and 700 million in 1981, probably more.¹ Her agriculture, it follows, will need to be restructured to achieve this goal, and, in addition, to absorb her exploding rural workforce to the maximum possible extent on jobs that will provide at least a subsistence income. These and related questions are discussed in the second study to indicate how one could gather a full harvest.

The third part of the trilogy, titled *Obligations of Affluence*, will consider certain aspects of the relations between rich and poor nations, also between the rich and the poor within a developing country.

¹ And almost certainly one billion by the year 2000.

High-yielding Economics

Looking back over the years it is easy for me to detect, in hindsight, a unifying thread that runs through all my wanderings: I have been driven by a subconscious urge to cull ingredients from different sources to build an eclectic economic model to fit the conditions of a developing country like India. Or, to put it in the familiar terminology of a sister discipline, I have been engaged in an instinctive search for *genes of ideas* hoping to build some day *a high-yielding variety of economics*.

The analogy deserves to be pushed further. Not long ago, in the 1950's, many agricultural enthusiasts believed that all that was needed to solve the food problem of the developing countries was a massive transfer of the science and technology already available in the West. Their slogan was "knowhow showhow". Soon it came to grief, as it had to: They had overlooked that agriculture is a biological industry; that, as such, it cannot be mechanically transferred from one environment to a new and totally different one. Many fundamentals of the agricultural sciences hold good, irrespective of time and place. But production technology must be largely tailored to suit specific situations and frequently adjusted to changing conditions.

As a social science, economics, too, must follow a similar procedure. Many of its principles have a validity that is not time- or place-bound. But it is an illusion to

DAVID E LILIENTHAL

June 12/74

Dear friend Sen:

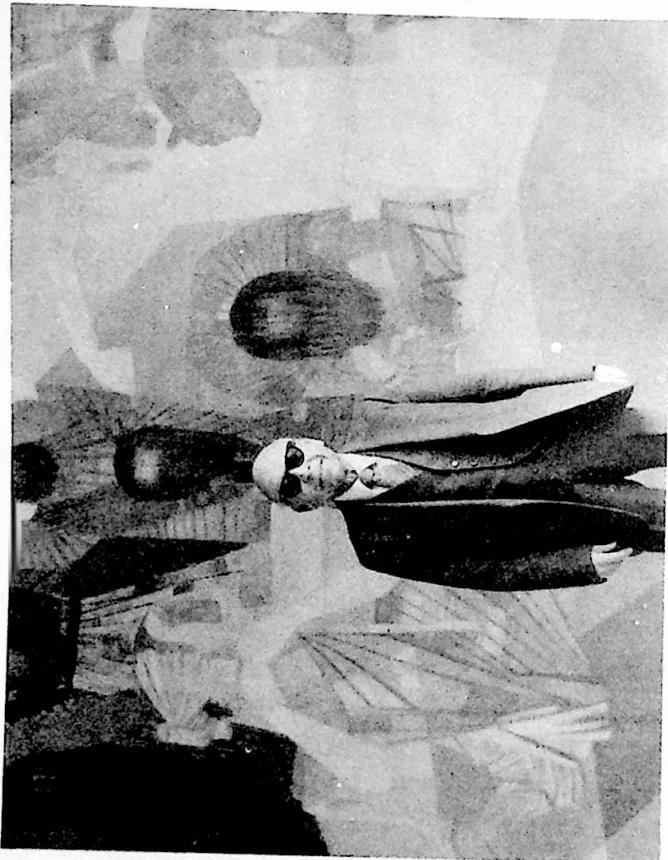
If only more people — whether Indian or American — grasped the concept and the spirit of your work and your writing the gloom I hear on all sides would be dispelled by an affirmative task to do.

I'm working hard, full of faith, and rejoice in the knowledge that there are men like yourself — not enough of them, true

Best

David Lilenthal

Attach copy
of remarks
at Asia House



Dr. Sudhir Sen at the United Nations, January 1985.

think in terms of a universally valid economic model. To be really relevant, the model must be built, with skill and care, to fit the specific conditions of a particular country at a particular stage of development.

Moreover, to be really highyielding, economics must go far beyond its own narrow boundaries. For, there are many non-economic factors which constantly impinge on it and thereby determine the ultimate economic results. These factors must be carefully identified, analyzed, and given the weight they deserve in the model-building exercise.

The old masters of economics, starting with those who laid its foundations some two hundred years ago, were far more aware of this truth than most of its contemporary practitioners who are obsessed with computers and lack the broader vision.

The worst threat comes from pure economics which deal with abstractions, not realities. It has undoubtedly its utility, like pure sciences in agriculture. But it must not be overlooked that it is too pure to serve the needs of development which calls for a complex and imaginative mix including a good many elements which are non-economic, or impure.

Years ago I came across a businessman's maxim which, to me, made a lot of common and uncommon sense: "Do the best you can with what you have where you are". It makes a lot of economic sense as well. Indeed, I believe it contains the right mandate for all those who are engaged in the historic challenge of lifting two-thirds of humanity above the poverty line.

Yes, the poor nations can greatly speed up their development with the tools they have at their disposal today. The biggest push will come when agriculture based on highyielding varieties of crops is combined with a high-

yielding variety of economics based on resource development. How to effectuate this combination and to strengthen it with the input of other relevant factors, both economic and non-economic, has been discussed at length in the twin studies mentioned in the preceding section.

What for?

What is the good of doing studies like these? Will the governments care to listen, and change their course? These questions have been put to me by others—also by myself. However, the answers were never really in doubt, at least in my own mind.

First, there may be no cure even when the diagnosis is correct. This is true, but it is no argument for not undertaking a thorough clinical analysis of an ailment. For what is certain is that there will be no cure if there is no correct diagnosis.

Second, whatever may be the deficiencies of the developing countries, there is little doubt that they have, in general, been ill-served—even by their well-wishers. They have been guided, often with the weight of great authority, into inappropriate economic thinking and low-yielding programmes, which have stultified their progress. They must be freed from the deadening grip of both. The damage done to them must not be allowed to continue unchecked, or unchallenged.

The truth is that poverty can be greatly alleviated with the tools and resources they possess, and it can be done much faster than we realize or care to find out. Yet this is the message we have to carry to all developing countries—with the highyielding varieties of crops and a high-yielding variety of economics and persuade them to get busy on development the right way. The great major-

ity of them, we can confidently assume, will respond affirmatively, and enthusiastically.

The final justification for undertaking this study is of a more personal nature. At this point I feel tempted to twist some lines of Wordsworth to find the right vehicle for a different and yet not so different feeling and say:

My heart sinks low when I behold
The poverty around me.
So was it when my life began.
So is it now

.
My days have been, I wished or not,
"Bound each to each by natural piety".

My studies are the outcome of a categorical imperative rooted in early emotions, whatever may be their worth to others.

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