

Green Struggle: Balancing Humans and Nature

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Abstract

In the present situation of world, spectacular developments in science and technology with its concomitant side effects and nuclear arms race need not make us believe that annihilation is inevitable. Greater catastrophes of illness, epidemics, earthquakes man has survived. So long he has the spirit in him, so long as he does not extinguish that flame, he can move forward. From molten mass of fire we came into living beings, from living beings we have come to animals, from animals we came to human beings, but man is not the crown of evolution. Man has to be surpassed. He has to preserve himself. The future is in our hands—it is not inevitable. There is no such thing as historical determinism or mechanical necessity. The whole past tells us that there is hope for mankind if they are able to use their freedom, their responsibility in the right way. Future of man appears not merely as a succession of probable futures, but an array of possible futures and a conflict over preferable futures. But he has to put in efforts to convert certain possible into probable's in pursuit of an agreed on preferable. Almost everything humans do, from growing food to manufacturing products to generating electricity, has the potential to release pollution into the environment. Regulatory agencies charged with protecting the environment identify two main categories of pollution: point-source and nonpoint-source pollution

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Introduction

An amazing mastery over the environment has been achieved as the product of modern science and its cumulative evolution during past centuries. Technology, i.e. science-based knowledge has a liberatory power when adequately chosen, freeing man from drudgery. Technology has changed the world in which we live. The landing on the moon, the precision of time and date of colliding Comet Shoemaker levy with Planet Jupiter and the transplant of human heart are only the more spectacular of them what in countless ways advances have been made which are likely to have a tremendous impact on man's life in the decades to come. Modern technology can produce so many goods and services with so little effort that man can be set free for the first time in human history from the clutches of poverty and misery. Dr. S. Radhakrishnan has described these achievements in the following words: "We have learnt to ride the waves of the wind, to harness the rivers for watering deserts, to master the earth and the creature thereof and with the earth as our footstool reach out to stars".¹

The current state of environment is a disturbing one. It has been evident from the continuous rise in earth's mean surface temperature, which results in the melting

of polar ice. The changes that are happening on the climatic front in recent years are at a faster pace compared to the earlier era. The average facade temperature of the globe has augmented more than 1 degree Fahrenheit since 1900 and the speed of warming has been almost three-fold, the century long average since 1970. The main gases contributing to green-house effect are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (NO). The largest producers of these gases are the thermal power plants, transportation by road and air, heavy industries, all of which are indispensable in the present model of development. The depletion of the ozone layer is another pertinent environmental issue which has similar implications.

Our ability to control disease is perhaps a hundred times what it was a century ago, our energy, resources are thousand times so great, our weapons a million times as rapid. The growth rate is exponential. The time required for a new invention to spread into general use shrinks exponentially. It took 150 years to diffuse the steam engine, 50 for the car, 25 for the radio-set, less than 15 for the transistor and only a decade for the computers.

The modern technology as developed mainly in the west is considered even more desirable object for adoption by poor countries. It is often suggested that developing countries have a special advantage in being late-comers as they can jump over the intermediate stages of technological development and can now go straight to the highest level of technology to produce affluence without exploitation. The idea of great jumps from bullock cart to jet engine can remove several bottlenecks from the path of development of the third world.

In fact, the very success of science and technology has generated to some extent a backlash. There is a great debate among the economists and technologists about the danger of unlimited application of science and technology for accelerating industrialization leading to the exploitation of natural resources and the anti-life impact of technology on human existence itself. The technomaniacs fail to see that the human life span is the unchanging yardstick in future also, and it is not the man who must adapt to the storms generated by science, but science and technology must adapt to man and their adaption means more than a simple limitation of scientific activity. There is a growing feeling among many that we are going too far and the vastly increased power, that technology has placed in the hands of man, has not been matched by his ability to use it wisely.

Society has come to realise slowly that earth unimaginably rich in natural resources is limited in the amount of abuse that it can bear without disastrous effects on the biospheres. Perhaps we failed to perceive this earlier because we have been so busy enjoying the benefits of the technological advancement that we had not had time to think about tomorrow.

Earth, the planet we inhabit, is a single living, pulsating entity and the human race an interlocking extended family. The land, water and the atmosphere which constitute its environment, support come from some 0.36 million species of plants and more than a million species of animals. The unprecedented human interference into the environment has upset the delicate ecological balance of our planet. Ruthless exploitation of non-renewable natural resources has created havoc and if allowed to continue can result in a series of major ecological disasters that can disrupt life on this planet. Some of the most dramatic cases of tempering with the environment are man made fires, slash and burn agriculture, mineral mining, dumping of sewage and industrial wastes, introduction of

new transport system into natural areas, persistence of nuclear testing and disposal of nuclear wastes, the danger of global warming and the attenuation of our ozone shield, the menace of deforestation leading to destruction of many species of flora and fauna, devastation of landscape by herbicides, introduction of pests into new areas, over population, overgrazing coupled with drought, extensive air and water pollution, and the poisoning of the food chain, the malign underworld of drugs and the alarming spread of communicable diseases. All these problems which the human race share in common, and in order to solve them people must try to attain as complete an understanding of their environment as possible.²

The survival of man depends on how judiciously he manages the earth and maintains the quality of his overall environment. One fact we must bear in mind is that our genetic make up can not adapt to a changing environment such as rise of carbon-dioxide, or to reduce oxygen content in the air we breathe, all due to too much of fossil fuel burning and destruction of vegetation, too much of toxic substances in our air and water etc. We can not develop resistance to toxic effects of many poisonous materials we are pouring out in the atmosphere, water bodies and soil. It is indeed a wonder how we are bearing the onslaughts of ecological blacklashes in our environment. We are reaching the limits of tolerance on most fronts and any greater onslaught might result in major catastrophes. Man has no option other than to seriously fight for the cause of sustained quality of his environment and natural resources and this fight has to be united and concerted at all levels—individual, communities, villages, towns, districts, states, governments and inter-governmental bodies, continental and global. In this endeavour short-term personal or regional interest must be subordinate to the global and long range interest. This can be achieved through mass education, enacting uniformly standard laws etc. To save our environment, all nations, all religions and all human races have to stand united on a common platform guided by sound ecological principles alone. Simultaneously we have to control the human population or atleast ensure a zero per cent rise level. If these are not handled on a war footing, our biosphere will be in danger of a major catastrophe.

Regarding prospectus of science and technology advances, Philip Hender, President National Academy of Sciences, USA describes that at some unspecified date in the future, "The bulk of humanities will be gathered in megalopolies, dwelling in huge buildings surrounded by parklands perhaps covered with domes within which the atmosphere will be maintained rather constant. Each individual will have a private pocket—two-way television instrument and immediate personal access to a computer as his news source, privately programmed educational medium, memory and personal communicator with the world at large—his bank, broker, government agents, shopping services etc. The bulk of the labour force, then, will engage in activities currently classified as services rather than production goods."³

He continues that most of us held such a dream in common and the most important thing one can say about that dream is that it may well be feasible. He believes that biological and physical research can refashion ourselves and our world and there is really no question whether man can live with his technology. However, he ponders over the real question whether man can learn to live with himself. The answer he provides is that man can not learn to live with himself in a technologically obsessed society, therefore, we have to limit technology.⁴

Actually man does not know how to be a truly modern man. Other species do not have similar failings. A swallow has learned what it takes to be swallow. A tiger knows how to be a tiger. By the use of natural wisdom, these species are continually readjusting and refining their survival qualities, adapting them to the modification of their environment. Their success is proved by their very existence as the present day end product of age long evolution. Now they are in danger because man moves more against them. Already at the dawn of history, he began to forsake his natural capacity to adapt and survive, finding it expedient to trust his lot more and more to his brain, that is to his technological capacity and, by it, to modify the environment instead. While the animal adapts themselves according to the environment man tries to modify the environment according to his requirements. The club of Rome has termed it the 'predicament of mankind'.⁵

In a commentary on the report, "The Limits to Growth—A Report to the Club of Rome," the Executive Committee of the Club expresses this view.

We are convinced that realisation of the quantitative restraints of the world environment and of the tragic consequence of an overshoot is essential to the initiation of new forms of thinking that will lead to fundamental revision of human behaviour and by implication, of the entire fabric of the present day society... We affirm finally that any deliberate attempt to reach a rational and enduring stage of equilibrium by planned measures, rather than by chance or catastrophe, must ultimately be founded on a basic change of values and goals at individual, national and world level. And they did not hesitate to use highly dramatic language, such as the following:

"The concept of a society in a steady state of economic and ecological equilibrium may appear is to grasp, although the reality is so distant from our experience as to require a Copernican revolution of the mind. Translating the idea into deed, though, is a task filled with overwhelming difficulties and complexities. We can talk seriously about where to start and only when the message of 'the limits to growth' and its sense of extreme urgency, are accepted by a large body of scientific, political and popular opinion in many countries. The transition in any cases is likely to be painful, and it will make extreme demands on human ingenuity and determination. As we have mentioned, only the conviction that there is no other avenue to survival can liberate the moral, intellectual and creative forces required to initiate this unprecedented human undertaking."⁶

The concept of earth's finiteness is by no means new. But its corollary, expounded in the report, that due to the planet's finite dimensions, there are necessarily limits to human expansion, was growing against the grain of growth culture prevailing in the world. The successes of the material revolution had made this culture arrogant. It was and is the culture of a civilization of quantity which neglects quality, and which couples its arrogance of the real-life supporting capacity of the planet with the extravagant exploitation of its resources and the insufficient erratic use of human capacity.

The growth syndrome which has developed is well known. When no remedy of society's ill is in sight, faith in growth takes over. Growth is considered as a super medicine. By producing abundantly one can try to meet all wants and satisfy demand or if demand is lacking, it can be created artificially. But now it is apparent that a policy of bounty can solve some problems indeed and alleviate others, but is something just a palliative and not

a permanent solution. Indeed, it is not being realised that this syndrome may mean the tragic end of earth resources and consequently the growth itself.

Alvin Toffler, in his best seller, 'Future Shocks' has well described the inexorable price we are paying for this technology which we are told is being developed for our benefit.

"Our technological powers increase but the side effects and potential hazards also escalate. We risk thermo-pollution of the oceans themselves, overheating them, destroying immeasurable quantities of marine life, perhaps even melting the polar ice caps. On land we concentrate such large masses of population in such small urban technological islands, that we threaten to use up the air's oxygen faster than it can be replaced, conjuring up the possibility of new Saharas where the cities are now. Through such destruction of natural ecology, we may literally in the words of biologist Barry commoner be destroying this planet as a suitable place for human habitation."⁷

Similarly, the major findings of the Global 2000, Report to the President of United States of America are:

"If the present trends continue, the world in 2000 will be more crowded, more polluted less stable ecologically, and more vulnerable to disruption than the world we live in now. Serious stresses involving population resources and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today. The average gross national product per capita is projected to rise substantially in some L.D.Cs. (especially in Latin America) but in great populous nations of South Asia it remains below \$ 200 a year."⁸

Thus, the cumulative impact of this growth syndrome is now being felt like shock waves in rising disillusionment, thickening frustration and mounting fear. The nature of this predicament lies in the fact that science and technology which emerged as a system promising to liberate human beings from the bondage of poverty and misery etc. are opening ever-new frontiers discussed above. It is amply evident that the primary motivating force of such technologically induced economic growth is the satisfaction of ever-proliferating material wants. In such a system, the quality of life as measured primarily in, terms of material well-being which is sought to be insured even at the cost the degradation and defilement of the eco-system. Like the club of Rome or Alvin Toffler etc., Gandhi did not employ nor did he require a computer to arrive at his conclusions. Common sense told him that this western-style industrialisation for the whole of mankind could never be implemented. He wrote as early as in 1928: "God forbid that India should even take to industrialism after the manner of the west. If an entire nation of 300 million (the figure has now risen to more than 950 million) took to similar economic exploitation, it would strip the world bare like locusts."⁹ Gandhi attacked western industrialisation craze on many grounds. Unmindful exploitation of natural resources leading to destruction of ecological balance is one main grounds among them.

No single factor, according to Gandhi, has contributed more to the phenomenon of world-wide erosion of natural resources than the greater possibilities that have been opened up of getting rich quickly with the help of new and powerful

machines. Nineteenth century economy, particularly in the British empire with its expanding power industry, colonial system of rule and huge overseas financial investments by the European powers, gave rise to a heavy, ceaseless drain of good and raw materials from the countries affected by it. Vast regions of earth were as a result depleted of their soil fertility. In the words of Jacks and Whyte, "The New World acquired in a few years the fruits of the old world's thousand years struggle with Nature."¹⁰ Western nations achieved a meteoric burst of prosperity and power for themselves without straining their own resources within their own borders but only by robbing other countries of their natural resources that had been maintained for thousands of years. In the exploited countries, as in India, population increased, roads and railways were built, there was rapid expansion of trade and industry, new cities sprang up, higher living standard were achieved for privileged class, forests were cleared, pastures brought under cultivation, insects and vermin 'which hold the balance between the organic and inorganic forces were annihilated.'¹¹ But all this outward show of progress in the exploited country was paid for in progressive deterioration of natural resources, silted up rivers, recurring floods, droughts, dust-storms and famines and diseases due to the deepening poverty and lowered stamina of the masses.

So long as food and raw material continue to be produced in one region to be consumed in another in bulk in pursuit of the philosophy of unlimited material wants in limited world, nature's equilibrium can not be maintained. There are certain things found in nature apparently have no life and do not grow or increase, and so get exhausted or consumed by being used.

The world possesses a certain stock of such material as coal, petroleum, ores or minerals like iron, copper, gold, etc. These being available in fixed quantity may be said to be 'transient.' While the current of overflowing water in a river or the constantly growing timber of a forest may be considered permanent as their stock is inexhaustible in the service of man but only when the advantage of this flow or increase is taken in a calculated manner.

In animate life, the secret of nature's permanency lies in the cycle of life by which the various factors function in close co-operation to maintain the continuity of life. A grain of wheat falls from the parent plant. It gets hurried in the earth, sends out roots in the soil and through them absorbs nutritive elements with the aid of moisture and heat of the sun. It sprouts up into a plant by this process. The plant shoots out leaves which helps to gather nourishment from the air and light, as the roots do from the soil when some of these leaves die, they fall to the ground and are split up or decomposed into the various elements which the parent plant had absorbed from the soil, air and light. This is again used to nourish the next generation of plants. The bees etc. while gathering the nectar and pollen from these plants for their own food, fertilize the flower and the grains, that are formed in consequence, again become the source of life of the next generation of plants. When ready, these seeds fall to the ground and come to life with the help of soil that has already been enriched by fallen leaves of the previous generation of plants.

Insects and worms and some of the rodents and burrowing animals play an important part in the restoration and maintenance of nature equilibrium. Earth worms are known to turn and aerate the soil to a depth of from 4 to 6 feet. Some animals though not directly useful to agriculture 'fit into complicated ecological scheme as one of the links in a food cycle.'¹² They provide food to other species that are useful to agriculture

by living upon insects, plants, animals that are destructive of crops. The system is interdependent here. Thus, a fresh cycle of life beings once again. In this manner life in nature goes on, and as long as there is no break in this cycle, the work in nature continues endlessly, making nature permanent.

Human life rarely reaches even a hundred years while the unit to reckon the life of nature will run into astronomical figure. The problem arises when this life of hundred years starts playing with the life of astronomical figures and exhaust both the transient and permanent in nature.¹³ Nature functions in a pattern and that pattern keeps the fertility of nature intact.

Civilizations come and civilizations go but the nature remains. "If civilization is such that it degrades the nature, then it is the civilization and not the nature that comes to an end."¹⁴ Sooner than later, we have got to come to terms with nature and start building afresh from the start. The struggle for existence that has hither to principally been a struggle for markets is bound in not every distant future to become a struggle for maintaining ecology. Civilization will then have to set about to base itself on a new, symbiotic relationship with nature. In that set up it is obvious that farming-cum-small scale and cottage industries will have to be the way of life for the bulk of population. The social and political ascendancy of the town will end. The power of the country in relation to that of towns will increase. The men who rule the river according to the way and manage the land, will rule the nation. They may not have the wealth but collectively they will have the power now in the hands of captains of industry. Industry will become the handmaid of a balanced and fruitful agriculture upon whose enduring prosperity the fate of towns depends.¹⁵

Conservation of industry in big towns is not good for industry itself. By breaking up big industrial units into a number of small ones and removing them to villages, it is claimed, industrialism will be cured of most of its glaring evils and the conflict between industrial and agriculture will be resolved. Geographical dispersion of industry and its location in the countryside is, however, as different from the decentralised economy that Gandhi aims at 'as chalk is from cheese.'¹⁶ As an economic and social policy, industrialisation can be effective only on the basis of individual production and individual production is not mass production on a reduced scale. Individual handicrafts production and mass production in the villages represent two rival systems of economy. When Henry Ford hit upon the idea of the assembly line taking jobs to the workers instead of the workers having, to walk to various jobs in different parts of the workshop it was unquestionably a more economic way of factory management. It cut down costs but it did not mean any abatement of either the profits or the power of the industrial magnate. Dispersion of the industry and its location in the countryside to facilitate mass production in the vicinity of the homes of the country folk, by taking the assembly line right into the countryside, might provide to the industrialist a more thorough and efficient means of the economy and biological exploitation of the material and human resources of the countryside. It turns the farms into an adjunct to the factory and the countryside into a larder for the non-producing industrial city proletariats to draw upon, but it means absolutely no lessening of the political and economic control of industry and high finance, rather the reverse. The revival of the village is possible when it is no more exploited. The city must get off the back of the village. But industrialisation on a mass scale, as Gandhi pointed out would necessarily lead to passive or active exploitation of the villagers, as the problems of the

competition and market come in.¹⁷ The Charkha and the allied industries alone, maintained Gandhi could stop exploitation of the villages and abolish all inequalities both social and economic between the urban and the rural. "The rising consciousness of the strength which non-violence gives to the people and their intelligent refusal to co-operate in their slavery must bring about equality."¹⁸

He described the spinning wheel as, 'science reduced to the terms of masses.' In its economic aspect, he looked upon it as the means par excellence of overcoming the mental inertia of the masses and of quickening their intelligence and inventive faculty. At the beginning of non-cooperation movement, when million had taken to the spinning wheel and the allied processes, and everybody from the oldest village dame to the tiniest to playing his 'Takli' was busy thinking how to improve them. He once exultantly remarked, "Never has the spirit of invention been more briskly at work among the common people than now."¹⁹

Henry Ford in his personal memoir, 'My Life and Work', has recorded how once when he received an order for tractor from one country, he sent trucks instead. "It was to make the people speed minded", he explained. "Once they became time conscious he could count upon their wanting many more tractors." And the result proved that he was right. In the wake of trucks came a much bigger order for tractor than he had originally received."²⁰ It was Gandhi's anticipation that the resuscitation of the spinning wheel with all that it implies would inaugurate a new revolution in technology which would give birth to a series of invention as marvellous as those that made the industrial revolution but of a different order. They would reverse the evil effects of the industrial revolution. It was Gandhi's aim to bring down science and technology from the mountain tops to the plains where common folk dwell, so as to give to the masses—the small producer, the tiller of the soil and the handicrafts man plying his craft in his cottage their full benefit. This approach is more human, gentle and not based upon exploitation of natural resources but on their proper use for the benefit of the whole humanity.

To Gandhi, essential human requirements are food, shelter, clothing, health and individual freedom. To take up food only in spite of all the wonderful discoveries that have been made in the science of agriculture, labour saving machines which enable one person to do work of many, new fertilizers and insecticides, and new hardiner strains of crop which thrive on soil and in climates that were formerly considered to be uncongenial—our food supplies are not keeping pace with the increasing population taken the world over, and the danger of world starvation can by no means be dismissed.

Population control is undoubtedly the ultimate solution.²¹ But whatever may be the method of choice for population control, one thing is clear. It must go hand in hand with a system of economy that would enable the maximum population to be maintained on the available acreage in health and reasonable comfort for the longest period of time without impairment of soil fertility. It can be shown that the system that is best suited for this is that of intensive individual farming based on cattle and human economy, as a way of life, supplemented by cottage industries as against large scale, collective, mechanised farming ancillary to heavy industrialisation.

Prince Kropotkin has in his 'Fields, Factories and Workshops Tomorrow' showed on the basis of experiments which he himself had conducted, what unbelievable result could be achieved by individual intensive small scale agriculture.²² F.H. King, the

great American authority on Agricultural Physics and Soil Management has similarly recorded, "In China, Korea and Japan conservative economy in agriculture has made it possible after twenty and perhaps thirty centuries for their soils to produce sufficient for the maintenance of such dense population as are living in these countries." He and his colleagues, were 'instructed, surprised and amazed' at the conditions and practices which confronted them whichever way they turned; 'Instructed in ways and extent to which these nations for centuries have been and are conserving and utilising their natural resources, surprised at the magnitude of the returns they are getting from their fields.'²³ Similarly, Gandhi too was of the confirmed opinion that given a proper land system, 'conservative subsistence farming could enable us to maintain out of our own resources all our population even with the present rate of increase for a good long time to come, provided we are prepared to forego for the time being some of the trimmings of progress and to put first things first.'²⁴ He accordingly made the proper disposal of night-soil by compositing the foundation of his reconstruction schemes beginning with his Ashram. The erection of trench or pit latrines and scavenging was an essential part of the daily ashram routine and of the apprenticeship which every novice went through.

There are two well known approaches to life. One is embodied in the well-known dictum of the famous German Professor William Roscher. "Every advance in culture made by man finds expression in an increase in the number and in the keenness of his rational wants."²⁵ The other summed up in the Indian spiritual ideal of a watchful self-restraint.

The nature sets limits. It requires a person to contain himself within its capacity. Thus the emphasis is on self-control and limitations of wants. Mechanised industry knows no such limitation. Its law is one of progressive increase. Those who laid down the pattern of India's ancient culture could not accept the notion that culture increases with the increase in the number of man's wants and their satisfaction.

Gandhi advocated a solution of this problem in the form of wantlessness, meaning thereby that let us voluntarily reduce our wants to a genuine level. Professor J.K. Mehta, a distinguished economist has suggested a process of killing of wants.²⁶ Wants can be killed by wants only. Hence stronger wants must be employed to kill the weaker wants. And when such a battle is fought in the human mind, all the inferior wants get ultimately killed and one is left with superior wants only. The better among them can, in their turn, be employed to kill the other wants. In this way we can ultimately reach a stage in which only the most superior (in other words most genuine) wants would be left to satisfy and it is only when this stage is reached that we can with impunity satisfy the wants.²⁷ "The mind is a restless bird", observed Gandhi, "The more it gets the more it wants, and still remain unsatisfied... Our ancestors, therefore, set a limit to our indulgence... Our fore-fathers knew that, if we set our hearts after such things, we would become slaves and lose our moral fibre. They, therefore, after due deliberation decided that we should only do what we could with our hands and feet. They saw that our real happiness and health consisted in a proper use of our hands and feet." If we follow this it can conserve a lot of natural resources for us which will be sufficient for generations to come.

The propensity to accumulate commodities cramp the soul and degenerate into the morbid desire to make a fetish of external goods of life. The luxury of the ascendant classes therefore, make them morally deprived. The monopolization of the things by a few men at the top is unjust. Moreover, accumulation is condemnable because it is not

possible to be practised by all. "I venture to suggest," he observed in one of his earliest speeches in India, "That it is the fundamental law of nature, without exception that nature produces enough for our wants from day to day, and if only every body took enough for himself and nothing more, there would be no pauperism in this world."²⁸ He did not want to dispossess anybody, he went on to say, "I should then be departing from the rule of ahinsa ... But... I do say that... you and I have no right to anything that we really have until these... millions are clothed and fed better. You and I... must adjust our wants, and even undergo voluntary starvation in order that they be nursed, fed and clothed."²⁹

Men by virtue of his ever unsatisfied desire for more and more has made a hell of this planet. Increasing ecological imbalance, environmental degradation, vanishing flora and fauna, unhampered population explosion and deteriorating human values all are the outcome of this greed of the modern Homo-Sapiena.

Gandhi without consciously attempting at a systematic theory explained the phenomena of the exploitation of natural resources through alienation also. He was of the opinion that the more nature was overpowered, the more alienated man will become from nature. He simultaneously wanted to focus on the relationship between man and his natural environment which would end exploitation, which in turn is the very cause of exploitation of nature. But this alienation of man from nature has also paved the way of alienation from himself also. His trueself is what man can discover through the search for truth following the path of non-violence. Gandhi has a full view of man, his spiritual, cultural and social aspects as much as his economic needs. This led him to advocate that man must adjust himself to nature and not the other way round. He would not permit imbalance to be created between man and his environment.

Similar views are expressed by two highly experienced ecologists, Tom Dale and Vernan Gill Carter, "Civilised man was nearly always able to become master of his environment temporarily. His chief troubles came from his delusions that his temporary mastership was permanent. He thought of himself as master of the world, while failing to understand fully the laws of nature. Man, whether civilised or savage is a child of nature—he is not master of nature. He must confirm his action to certain natural laws if he is to maintain his dominance over his environment. When he tries of circumvent the laws of nature, he usually destroys the natural environment that sustains him. And, when his environment deteriorates rapidly, his civilization declines."³⁰

The problem is how to conduct affairs in a manner that is compatible with Gandhi's approach. The problem gains real urgency, from the strenuous attempts all over the world to develop at any cost. This development is generally conceived along western lines. Yet it is easy to see that the western way of life can not be permanent and will be incompatible with peace if it spreads to all mankind.

The western way of life, even in a much more modest form than its American modal, requires the annual use of several tons of 'fossil fuel' per person. But the world's resources of fossil fuels, obtainable at reasonable cost, are strictly limited. It follows that a civilization based on fossil fuel can be only an episode in the history of man—and when measured against the life of nations, a very short episode. By using coal and oil, we live on capital instead of income. This is quite legitimate under certain conditions. When a young man has his education financed out of capital funds, but if he is wise he does two things; (a) he voluntarily limits his annual drafts on capital so that it will last at least

until he no longer needs it, and (b) he never loses sight of the fact that he must quickly learn to subsist an income, without further substantial drafts on capital. His principal task is to find a way of life that is self-supporting.³¹

Schumacher not only points out the defects and drawbacks of the system, but also suggests positive remedies. "If the road is leading us into a crisis of survival, we may consider whether new guidelines may be called for, which would point in opposite directions."

towards smallness rather than giantism;
towards simplification rather than growing complexity; towards capital saving rather than labour saving; and towards non-violence, in a rather generalised sense.³²

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