

ECOLOGISE
READING MATERIAL
FOR ECOLOGISE CAMPS

Sangatya Sahitya Bhandar

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Ecologise Camps: An Introduction

“When the last tree has been cut down, the last fish caught, the last river poisoned, only then will we realize that one cannot eat money.”

Native American Saying

We now live in an age of ecological change and turmoil that is unprecedented in scale and rapidity in the history of the earth. We are grappling with a slew of converging crises, most of which are the direct result of human activity and the ‘religion’ of ‘Growth and Development’ that we have embraced in the past 250 years of industrialisation. Climate change, natural resource depletion, species extinction, environmental degradation, population pressure and human conflict resulting in large scale refugee crises are some of the problems we have to contend with. Some of these, like climate change, are reaching tipping points beyond which changes become irreversible.

Humans are the only species on earth that have had such a massive direct impact on the environment in which we live, by virtue of the tools and technologies that we have developed, in the process of the ‘development’ of our ‘civilization’. Though the longevity of human life has increased due to advances in medical technologies, our ‘Quality of Life’, especially in cities, has taken a direct hit as a result of environmental degradation.

The food we eat contains toxic chemicals, the air we breathe is polluted, the water we drink is becoming more scarce and more contaminated, our lifestyles are becoming more sedentary, our consumerist tendencies are increasing the consumption of natural resources and generating more waste than natural processes can handle, our communities are disintegrating, lifestyle diseases are more prevalent, mental health issues are on the rise and injustices to politically and economically weaker communities is increasing.

Competition is becoming more intense, starting in schools and spreading to every other sphere of life. There is a feeling of despondence and helplessness among people for being dependent on the market economy. There is a growing realization of the impossibility of changing anything merely by changing personal lifestyles. Personal changes like using cloth bags instead of plastic shopping bags, switching to CFL or LED lighting, recycling waste, using solar energy, buying organic produce etc. have been reduced to mere tokenism. A more systemic change in the way the world operates is required now.

Living in the midst of these man-made crises, it becomes our urgent responsibility to change the way we live, so that we can avert or reduce the impact of these crises on our lives. As a species, we are in the unique position of being able to understand the source of these problems and also bring about the large scale changes that are required to save the environment that supports our life on this planet. It’s time we pause and think through some of the fundamental aspects of our lives and the way we go about living it. This would include thinking about the kind of material and social needs and aspirations we have, and how we go about interacting with the environment, the organisms and people around us in trying to meet our needs. We have come to call this as ‘ecologising’ ourselves.

‘Ecologising’ is an attempt to explore and understand the reasons behind the individual alienation, disgruntlement that one might experience as a part of our urban lives and also the causes for the larger environmental and social crises that are causing immense suffering to people and other life forms. As we

evolve in our understanding, we hope to also respond by finding alternative ways of living, learning and working towards a more personally meaningful and fulfilling life that is also less exploitative of nature and other people.

Ecologise Camps

Ecologise Camps are programmes through which people can explore such an ecologically more sensitive and sustainable way of life. Ecologise Camps not only attempt to create awareness about the converging crises, but also explore changes that we can implement in our own lives at an individual and community level, in response to them.

Cities by their very nature are unsustainable and are a net consumer of basic resources (water, energy, food, raw materials etc.) from the hinterland. We will explore means for city dwellers to move to rural areas or smaller towns and also look at farming and non-farming means of livelihood that might be possible in these areas. Ways of living a 'low impact' life will be explored through discussion and sharing. We will also explore ways of building resilient communities that can weather the turbulences more successfully.

Activities at the camp will include some amount of hands-on farm work, personal reflections, discussions and sharing, film screenings, open-ended discussions and anything else that you might be inspired to do. An important aspect of the camp would be the experience of living and working on the farm as a community, close to nature, with only basic amenities. We hope that the experience of collective living, a simple lifestyle and manual labour – experiences that are often missing in cities, would help participants in making choices for their own life-paths.

Basic, camp-style accommodation and wholesome local food will be provided. You are welcome to bring along any seeds, saplings or anything else to share or exchange. Some reading material will also be distributed among the participants. The cost of the camp will be shared among the participants. Participants are welcome to pay more or less (or nothing), as their personal circumstances permit.

Farm Volunteer Programme

The camps will also serve as orientation for those individuals interested in exploring these issues in greater detail. They can volunteer with any of the host farms listed below for an extended period of time, extending from a few weeks to months. The farm volunteer programme will include farm work for part of the day. Volunteers will have sufficient time to engage in reading, thinking, watching relevant films and engaging in discussions with the host/mentor. Participants will experience rural, low-impact living.

During the programme, the participants, on an average will be involved for 4 hours of manual work per day. They will have access to books and some relevant films and videos. It is expected, however, that on the whole, they will spend less time on phones and the internet than they have been used to in their city life. Also connectivity is not very good on most farms. The programme does not offer fellowships nor does it expect participants to pay for their learning or stay. However, they will be expected to look after their own self-maintenance needs such as cooking, cleaning, laundry, medical needs, etc during their stay.

The Farms

The following is a short list of farms that are interested in taking volunteers.

1. Sangatya, Nakre, Udupi District, Karnataka – 10 km. from Karkala town. Contact person: Shreekumar
2. Suman Sangam- A forest farm, Dharwad, Karnataka – 10 Km. From Dharwad City. Contact person: Sanjeev Kulkarni
3. No Man's Land Organic Farm, Sirsi, Uttara Kannada District, Karnataka – 16 km. from Sirsi town. Contact person: George Varghese
4. Doddaubbanur, near Thally, Krishnagiri District, Tamil Nadu – 60 km. from central Bangalore. Contact person: Vijay Kundaji

Reading Material

As an aid to learning and further exploration some reading material follows. We would like to emphasise that book learning alone is not learning. Real learning comes from working with your own hands, traveling, meeting and listening to people *and* reading.

Reading is of course can be a pleasure in itself. Also it can help us in avoiding mistakes in our work, though no real learning occurs without committing some mistakes. So happy reading

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NATURE'S METHODS OF SOIL MANAGEMENT

Albert Howard

And Nature, the old nurse, took
The child upon her knee,
Saying: 'Here is a story-book
Thy Father has written for thee.'
'Come, wander with me,' she said,
'Into regions yet untrod;
And read what is still unread
In the manuscripts of God.'

Longfellow
The Fiftieth Birthday of Agassiz.

Little or no consideration is paid in the literature of agriculture to the means by which Nature manages land and conducts her water culture. Nevertheless, these natural methods of soil management must form the basis of all our studies of soil fertility.

What are the main principles underlying Nature's agriculture? These can most easily be seen in operation in our woods and forests.

Mixed farming is the rule: plants are always found with animals: many species of plants and of animals all live together. In the forest every form of animal life, from mammals to the simplest invertebrates, occurs. The vegetable kingdom exhibits a similar range: there is never any attempt at monoculture: mixed crops and mixed farming are the rule.

The soil is always protected from the direct action of sun, rain, and wind. In this care of the soil strict economy is the watchword: nothing is lost. The whole of the energy of sunlight is made use of by the foliage of the forest canopy and of the undergrowth. The leaves also break up the rainfall into fine spray so that it can the more easily be dealt with by the litter of plant and animal remains which provide the last line of defence of the precious soil. These methods of protection, so effective in dealing with sun and rain, also reduce the power of the strongest winds to a gentle air current.

The rainfall in particular is carefully conserved. A large portion is retained in the surface soil: the excess is gently transferred to the subsoil and in due course to the streams and rivers. The fine spray created by the foliage is transformed by the protective ground litter into thin films of water which move slowly downwards, first into the humus layer and then into the soil and subsoil. These latter have been made porous in two ways: by the creation of a well-marked crumb structure and by a network of drainage and aeration channels made by earthworms and other burrowing animals. The pore space of the forest soil is at its maximum so that there is a large internal soil surface over which the thin films of water can creep. There is also ample humus for the direct absorption of moisture. The excess drains away slowly by way of the subsoil. There is remarkably little run-off, even from the primeval rain forest. When this occurs it is practically clear water. Hardly any soil is removed. Nothing in the nature of soil erosion occurs. The streams and rivers in forest areas are always perennial because of the vast quantity of water in slow transit between the rainstorms and the sea. There is therefore little or no drought in forest areas because so much of the rainfall is retained exactly where it is needed. There is no waste anywhere.

The forest manures itself. It makes its own humus and supplies itself with minerals. If we watch a piece of woodland we find that a gentle accumulation of mixed vegetable and animal residues is constantly taking place on the ground and that these wastes are being converted by fungi and bacteria into humus. The processes involved in the early stages of this transformation depend throughout on oxidation: afterwards they take place in the absence of air. They are sanitary. There is no nuisance of any kind -- no smell, no flies, no dustbins, no incinerators, no artificial sewage system, no water-borne diseases, no town councils, and no rates. On the contrary, the forest affords a place for the ideal summer holiday: sufficient shade and an abundance of pure fresh air. Nevertheless, all over the surface of the woods the conversion of vegetable and animal wastes into humus is never so rapid and so intense as during the holiday months -- July to September.

The mineral matter needed by the trees and the undergrowth is obtained from the subsoil. This is collected in dilute solution in water by the deeper roots, which also help in anchoring the trees. The details of root distribution and the manner in which the subsoil is thoroughly combed for minerals are referred to in a future chapter. Even in soils markedly deficient in phosphorus trees have no difficulty in obtaining ample supplies of this element. Potash, phosphate, and other minerals are always collected in

situ and carried by the transpiration current for use in the green leaves. Afterwards they are either used in growth or deposited on the floor of the forest in the form of vegetable waste -- one of the constituents needed in the synthesis of humus. This humus is again utilized by the roots of the trees. Nature's farming, as seen in the forest, is characterized by two things:

1. a constant circulation of the mineral matter absorbed by the trees;
2. a constant addition of new mineral matter from the vast reserves held in the subsoil.

There is therefore no need to add phosphates: there is no necessity for more potash salts. No mineral deficiencies of any kind occur. The supply of all the manure needed is automatic and is provided either by humus or by the soil. There is a natural division of the subject into organic and inorganic. Humus provides the organic manure: the soil the mineral matter.

The soil always carries a large fertility reserve. There is no hand to mouth existence about Nature's farming. The reserves are carried in the upper layers of the soil in the form of humus. Yet any useless accumulation of humus is avoided because it is automatically mingled with the upper soil by the activities of burrowing animals such as earthworms and insects. The extent of this enormous reserve is only realized when the trees are cut down and the virgin land is used for agriculture. When plants like tea, coffee, rubber, and bananas are grown on recently cleared land, good crops can be raised without manure for ten years or more. Like all good administrators, therefore, Nature carries strong liquid reserves effectively invested. There is no squandering of these reserves to be seen anywhere.

The crops and live stock look after themselves. Nature has never found it necessary to design the equivalent of the spraying machine and the poison spray for the control of insect and fungous pests. There is nothing in the nature of vaccines and serums for the protection of the live stock. It is true that all kinds of diseases are to be found here and there among the plants and animals of the forest, but these never assume large proportions. The principle followed is that the plants and animals can very well protect themselves even when such things as parasites are to be found in their midst. Nature's rule in these matters is to live and let live.

If we study the prairie and the ocean we find that similar principles are followed. The grass carpet deals with the rainfall very much as the forest does. There is little or no soil erosion: the run-off is practically clear water. Humus is again stored in the upper soil. The best of the grassland areas of North America carried a mixed herbage which maintained vast herds of bison. No veterinary service was in existence for keeping these animals alive. When brought into cultivation by the early settlers, so great was the store of fertility that these prairie soils yielded heavy crops of wheat for many years without live stock and without manure.

In lakes, rivers, and the sea mixed farming is again the rule: a great variety of plants and animals are found living together: nowhere does one find monoculture. The vegetable and animal wastes are again dealt with by effective methods. Nothing is wasted. Humus again plays an important part and is found everywhere in solution, in suspension, and in the deposits of mud. The sea, like the forest and the prairie, manures itself.

The main characteristic of Nature's farming can therefore be summed up in a few words. Mother earth

never attempts to farm without live stock; she always raises mixed crops; great pains are taken to preserve the soil and to prevent erosion; the mixed vegetable and animal wastes are converted into humus; there is no waste; the processes of growth and the processes of decay balance one another; ample provision is made to maintain large reserves of fertility; the greatest care is taken to store the rainfall; both plants and animals are left to protect themselves against disease.

Can mankind regulate its affairs so that its chief possession -- the fertility of the soil -- is preserved? On the answer to this question the future of civilization depends.

From An Agricultural Testament

HUMANITY DOES NOT KNOW NATURE

Masanobu Fukuoka

Lately I have been thinking that the point must be reached when scientists, politicians, artists, philosophers, men of religion, and all those who work in the fields should gather here, gaze out over these fields, and talk things over together. I think this is the kind of thing that must happen if people are to see beyond their specialties.

Scientists think they can understand nature. That is the stand they take. Because they are convinced that they can understand nature, they are committed to investigating nature and putting it to use. But I think an understanding of nature lies beyond the reach of human intelligence.

I often tell the young people in the huts on the mountain, who come here to help out and to learn about natural farming, that anybody can see the trees up on the mountain. They can see the green of the leaves; they can see the rice plants. They think they know what green is. In contact with nature morning and night, they sometimes come to think that they know nature. But when they think they are beginning to understand nature, they can be sure that they are on the wrong track.

Why is it impossible to know nature? That which is conceived to be nature is only the idea of nature arising in each person's mind. The ones who see true nature are infants. They see without thinking, straight and clear. If even the names of plants are known, a mandarin orange tree of the citrus family, a pine of the pine family, nature is not seen in its true form.

An object seen in isolation from the whole is not the real thing.

Specialists in various fields gather together and observe a stalk of rice. The insect disease specialist sees only insect damage, the specialist in plant nutrition considers only the plant's vigor. This is unavoidable as things are now.

As an example, I told the gentleman from the research station when he was investigating the relation between rice leaf-hoppers and spiders in my fields, "Professor, since you are researching spiders, you are interested in only one among the many natural predators of the leaf-hopper. This year spiders appeared in great numbers, but last year it was toads. Before that, it was frogs that predominated. There are

countless variations."

It is impossible for specialized research to grasp the role of a single predator at a certain time within the intricacy of insect inter-relationships. There are seasons when the leaf-hopper population is low because there are many spiders. There are times when a lot of rain falls and frogs cause the spiders to disappear, or when little rain falls and neither leaf-hoppers nor frogs appear at all.

Methods of insect control which ignore the relationships among the insects themselves are truly useless. Research on spiders and leaf-hoppers must also consider the relation between frogs and spiders. When things have reached this point, a frog professor will also be needed. Experts on spiders and leaf-hoppers, another on rice, and another expert on water management will all have to join the gathering.

Furthermore, there are four or five different kinds of spiders in these fields. I remember a few years ago when somebody came rushing over to the house early one morning to ask me if I had covered my fields with a silk net or something. I could not imagine what he was talking about, so I hurried straight out to take a look.

We had just finished harvesting the rice, and overnight the rice stubble and low-lying grasses had become completely covered with spider webs, as though with silk. Waving and sparkling with the morning mist, it was a magnificent sight.

The wonder of it is that when this happens, as it does only once in a great while, it only lasts for a day or two. If you look closely there are several spiders in every square inch. They are so thick on the field that there is hardly any space between them. In a quarter acre there must be how many thousands, how many millions! When you go to look at the field two or three days later, you see that strands of web several yards long have broken off and are waving about in the wind with five or six spiders clinging to each one. It is like when dandelion fluff or pine cone seeds are blown away in the wind. The young spiders cling to the strands and are sent sailing off in the sky.

The spectacle is an amazing natural drama. Seeing this, you understand that poets and artists will also have to join in the gathering.

When chemicals are put into a field, this is all destroyed in an instant. I once thought there would be nothing wrong with putting ashes from the fireplace onto the fields. The result was astounding. Two or three days later the field was completely bare of spiders. The ashes had caused the strands of web to disintegrate. How many thousands of spiders fell victim to a single handful of this apparently harmless ash? Applying an insecticide is not simply a matter of eliminating the leaf-hoppers together with their natural predators. Many other essential dramas of nature are affected.

The phenomenon of these great swarms of spiders, which appear in the rice fields in the autumn and like escape artists vanish overnight, is still not understood. No one knows where they come from, how they survive the winter, or where they go when they disappear.

And so the use of chemicals is not a problem for the entomologist alone. Philosophers, men of religion, artists and poets must also help to decide whether or not it is permissible to use chemicals in farming, and what the results of using even organic fertilizers might be.

We will harvest about 22 bushels (1,300 pounds) of rice, and 22 bushels of winter grain from each quarter acre of this land. If the harvest reaches 19 bushels, as it sometimes does, you might not be able to find a greater harvest if you searched the whole country. Since advanced technology had nothing to do with growing this grain, it stands as a contradiction to the assumptions of modern science. Anyone who will come and see these fields and accept their testimony, will feel deep misgivings over the question of whether or not humans know nature, and of whether or not nature can be known within the confines of human understanding.

The irony is that science has served only to show how small human knowledge is.

From “One Straw Revolution”

ON A PERSPECTIVE FOR RENAISSANCE OF AGRICULTURE

(A presentation made on 14-02-2003 – Hyderabad, India)

Venkat

What is needed is exactly that which present day society (capitalist society) is furiously applying itself to destroy, namely a peasantry – a body of men and women (and children too), rooted in their own countries, integrated in its own life, interpenetrated with the rhythms and harmonies of nature, sufficiently free and securely established to have the power to create and continuously recreate the world about them – a world from which emanate the sources of life.

If humans do have a destiny, a natural destiny, it is to sustain life on this planet. If it be so, then our need is a renaissance of our agriculture through nursing a robust peasantry which will restore the losses of quality and health of our soils, the health of our plants and animals and the health of humans and all other non-human life-forms. The health of all these is a single connected chain. Loss of a single link will result in the loss of the chain itself.

What is the first cause of loss of this health and quality? It is the loss of the fertility of our soils - the loss of the capacity for continued REPRODUCTION. The main reason for this loss is the disuse of organic/biological resources and methods enforced violently by an industrialized science whose methods have nothing to do with biological processes that sustain life.

(Why does present day society and its industrialized science do this? This question has to be posed and rational answers sought, answers which will take us to the very roots of the problem. Unless we are radical enough, that is go to the very roots, all our endeavours, for a renaissance of our agriculture, will not possess the needed blood and marrow, to succeed.)

How food is produced and how it travels from the farm lands to our eating bowls, OUGHT to be a matter of concern for all those who need food for their survival.

There is no longer any doubt that we are in the midst of an unprecedented and unusually rapid change in all aspects of the worlds' food production via agriculture. Trends being witnessed today are distinctive in several respects.

Concentration, centralisation and rural dispossession in the agricultural sector are being reinforced through exercising brutal power and violence to introduce new technological innovations, particularly genetically modified organisms, resulting in the proletarianisation of the farmers. The global commodification of agriculture has its counterpart in the destruction of peasant and small scale agriculture. Subsistence farming is on a rapid decline especially in third world countries, while production of luxury crops

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is being expanded. The result of all this is the paradox of a monumental increase in food production at one pole and an increase in world hunger at the other pole. This is a paradox not of our analysis but of the social system and capitalist agriculture. The growth of agribusiness has generated a host of ecological problems like the break in the soil nutrient cycle with the inevitable loss of fertility, pollution of land, water and food itself with various harmful chemicals and a litany of degradation and destruction of all natural resources needed for sustenance of life.

Response to the Onslaught

However, these destructive developments in agriculture have not gone unchallenged and unanswered. Throughout the world there are hundreds of movements that are pursuing ecological farming systems from a variety of perspectives. Wide numbers of individuals and groups are tackling different aspects of the problem with a variety of solutions. Quite often the responses are in trying to attack single issues. This resistance has focused on protecting and revitalizing small farms, promoting food safety, hunger related issues, gender inequality, empowerment of peasant communities for land holdings, displacement of people and loss of forest and agricultural lands under construction of large dams and highways, staving off ecological degradation by protecting the environment, protection of the diversity of flora and fauna etc. etc.

Some well intentioned groups suffer from technological determinism and emphasise the development and dissemination of low-input or appropriate technologies. Somehow it is believed these technologies have the capability of initiating beneficial social changes. Some emphasise the production of organic products for lucrative markets. Some others in the organic schools emphasise input substitution (i.e. biological insecticides in place of toxic chemicals) but leave monocultures untouched. Some others feel the need to find a niche crop that only few others are growing, start their own processing and sell directly to consumers through farmers' own markets. While there are some niches available they cannot offer relief to the mass of farmers nor remain viable on long term basis. Such understanding is a very benign view of capitalist agriculture and prevent many well intentioned groups from understanding the social and structural roots of environmental and social degradation.

However, in general, the resistance over a host of these issues has been to secure food self sufficiency and security, to preserve the natural resource base and to ensure social equity as well as economic viability. On the whole these grass root movements for a sustainable food and agricultural system as an alternative to the present one, have been gaining momentum. It is swelling into a significant SOCIAL MOVEMENT, with local, regional, national and global networks. All these grass root movements have to be supported, coordinated and militantly extended to newer areas.

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Although there is a plenty to find out, we already know how to design and implement agro ecosystems that are biologically viable and sustainable. Increasingly the experience of farmers and researchers is proving that it is possible to construct agricultural systems

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that provide a balanced environment, sustained yields, biologically maintained soil fertility through diversified poly cultural cropping patterns and the recycling of all organic wastes.

If enough number of people decide to take the destiny of their lives into their own hands and organize to take control over local resources, a local or regional food system becomes possible. Such systems based on farm lands and gardens of many sizes predominantly small and medium sized, growing food in ecological way, providing all round employment and a living wage and distributing the produce so that everyone can have access to safe and nutritious food **regardless of their capacity to pay**. This last characteristic will restore to food its natural and ethical function, namely, to satisfy the pangs of hunger of the many, instead of as at present, the production of food being primarily meant for profit for a few and hunger for the many. The restoration of this characteristic is what ought to provide the body and soul of ecological agriculture in its true sense and purpose by founding it on sustaining life. Ecological agriculture has to sustain life. If not, it ceases to be ecological.

Barriers to the Implementation of Alternatives

However, the mass of farmers cannot use all this knowledge and survive under the existing economic-political-social structure of present day society which is based on the evil around commodification of all things in nature including agriculture with only one end in view: the production of profit. The operative part of the present system is based on the principle of robbing the soil of its fertility and robbing the peasant of his life.

The nature of the existing structure and policies presently being enforced have strongly influenced the origin and continuation of the present state of affairs in agriculture and the lives of people world over. Acceptance of this structure as a given condition, restricts any real possibility of implementing alternatives that challenge the prevailing structures. Alternatives cease to be alternatives if the existing structure and policies are not challenged. Within such a system, to bring about a renaissance in agriculture and maintain its viability is a very benign view of the system and intellectually disable us to go to the roots of the problems we are confronted with.

A radical renaissance of agriculture is indeed needed, one that is guided by the notion that ecological agriculture cannot take living roots without comparable changes in the social/ political/ economic/ cultural arenas that also constrain agriculture. The expectation that some policy changes can result in a renaissance of agriculture is rather naïve, for it ignores the political power of agribusiness and the trends set into motion by globalization. Change for ecological agriculture to be viable will have to be the result of social movements in rural areas in alliance with urban movements for environmental protection and together with all other social movements of the oppressed.

Struggle for a renaissance of ecological agriculture cannot be separated from our broader struggle to build a socially just and ecologically sound society. Reciprocally, all struggles to create a humane, socially just and ecologically rational society will have to embrace the struggle for ecological agriculture.

What can be done

Since social activity is decisive in bringing about change, extending to ever wider areas becomes necessary. Formation of local groups, fostering rural partnerships and alliances in joint struggles, promoting farmer to farmer exchanges for sharing experiences, information, resources and skills etc. are some important platforms for social action in rural areas.

The renaissance we are seeking requires new value systems, and attitudinal changes. Some specific strategies for ecological revival are necessary. It starts with taking control of the immediate environment and taking full charge of all presently available natural and human resources through cooperation of local affinity groups and work for increasing these assets. Utilisation of these resources/ assets should assume a different qualitative basis. The strategy should be to increase FARM GENERATED INPUTS needed for agriculture, namely, seed, soil, water, labour, and nutrition for crops (by recycling all organic wastes back into soils). As far as OUTPUTS are concerned again a different strategy has to be that the outputs are primarily meant for subsistence and direct consumption needs of farmers locally, rather than be directed solely for the purpose of the market needs. Since human needs are varied, obviously the outputs have also to be diverse and varied rather than monocultures.

WALKING

Henry David Thoreau

I wish to speak a word for Nature, for absolute freedom and wildness, as contrasted with a freedom and culture merely civil—to regard man as an inhabitant, or a part and parcel of Nature, rather than a member of society. I wish to make an extreme statement, if so I may make an emphatic one, for there are enough champions of civilization: the minister and the school committee and every one of you will take care of that.

I have met with but one or two persons in the course of my life who understood the art of Walking, that is, of taking walks—who had a genius, so to speak, for SAUNTERING, which word is beautifully derived "from idle people who roved about the country, in the Middle Ages, and asked charity, under pretense of going a la Sainte Terre," to the Holy Land, till the children exclaimed, "There goes a Sainte-Terrer," a Saunterer, a Holy-Lander. They who never go to the Holy Land in their walks, as they pretend, are indeed mere idlers and vagabonds; but they who do go there are saunterers in the good sense, such as I mean.

I think that I cannot preserve my health and spirits, unless I spend four hours a day at least--and it is commonly more than that-- sauntering through the woods and over the hills and fields, absolutely free from all worldly engagements. You may safely say, A penny for your thoughts, or a thousand pounds.

When sometimes I am reminded that the mechanics and shopkeepers stay in their shops not only all the forenoon, but all the afternoon too, sitting with crossed legs, so many of them--as if the legs were made to sit upon, and not to stand or walk upon--I think that they deserve some credit for not having all committed suicide long ago.

My vicinity affords many good walks; and though for so many years I have walked almost every day, and sometimes for several days together, I have not yet exhausted them. An absolutely new prospect is a great happiness, and I can still get this any afternoon. Two or three hours' walking will carry me to as strange a country as I expect ever to see. A single farmhouse which I had not seen before is sometimes as good as the dominions of the King of Dahomey. There is in fact a sort of harmony discoverable between the capabilities of the landscape within a circle of ten miles' radius, or the limits of an afternoon walk, and the threescore years and ten of human life. It will never become quite familiar to you.

What is it that makes it so hard sometimes to determine whither we will walk? I believe that there is a subtle magnetism in Nature, which, if we unconsciously yield to it, will direct us aright. It is not indifferent to us which way we walk. There is a right way; but we are very liable from heedlessness and stupidity to take the wrong one. We would fain take that walk, never yet taken by us through this actual world, which is perfectly symbolical of the path which we love to travel in the interior and ideal world; and sometimes, no doubt, we find it difficult to choose our direction, because it does not yet exist distinctly in our idea.

The African hunter Cumming tells us that the skin of the eland, as well as that of most other antelopes just killed, emits the most delicious perfume of trees and grass. I would have every man so much like a wild antelope, so much a part and parcel of nature, that his very person should thus sweetly advertise our senses of his presence, and remind us of those parts of nature which he most haunts. I feel no disposition to be satirical, when the trapper's coat emits the odor of musquash even; it is a sweeter scent to me than that which commonly exhales from the merchant's or the scholar's garments. When I go into their wardrobes and handle their vestments, I am reminded of no grassy plains and flowery meads which they have frequented, but of dusty merchants' exchanges and libraries rather.

In literature it is only the wild that attracts us. Dullness is but another name for tameness. It is the uncivilized free and wild thinking in Hamlet and the Iliad, in all the scriptures and mythologies, not learned in the schools, that delights us. As the wild duck is more swift and beautiful than the tame, so is the wild--the mallard--thought, which 'mid falling dews wings its way above the fense. A truly good book is something as natural, and as unexpectedly and unaccountably fair and perfect, as a wild-flower discovered on the prairies of the West or in the jungles of the East.

Genius is a light which makes the darkness visible, like the lightning's flash, which perchance shatters the temple of knowledge itself--and not a taper lighted at the hearthstone of the race, which pales before the light of common day.

In short, all good things are wild and free. There is something in a strain of music, whether produced by an instrument or by the human voice--take the sound of a bugle in a summer night, for instance--which by its wildness, to speak without satire, reminds me of the cries emitted by wild beasts in their native forests. It is so much of their wildness as I can understand. Give me for my friends and neighbors wild men, not tame ones. The wildness of the savage is but a faint symbol of the awful ferocity with which good men and lovers meet.

I would not have every man nor every part of a man cultivated, any more than I would have every acre of earth cultivated: part will be tillage, but the greater part will be meadow and forest, not only serving an immediate use, but preparing a mould against a distant future, by the annual decay of the vegetation which it supports.

We have heard of a Society for the Diffusion of Useful Knowledge. It is said that knowledge is power, and the like. Methinks there is equal need of a Society for the Diffusion of Useful Ignorance, what we will call Beautiful Knowledge, a knowledge useful in a higher sense: for what is most of our boasted so-called knowledge but a conceit that we know something, which robs us of the advantage of our actual ignorance? What we call knowledge is often our positive ignorance; ignorance our negative knowledge. By long years of patient industry and reading of the newspapers--for what are the libraries of science but files of newspapers--a man accumulates a myriad facts, lays them up in his memory, and then when in some spring of his life he saunters abroad into the Great Fields of thought, he, as it were, goes to grass like a horse and leaves all his harness behind in the stable. I would say to the Society for the Diffusion of Useful Knowledge, sometimes,--Go to grass. You have eaten hay long enough. The spring has come with its green crop. The very cows are driven to their country pastures before the end of May; though I have heard of one unnatural farmer who kept his cow in the barn and fed her on hay all the year round. So, frequently, the Society for the Diffusion of Useful Knowledge treats its cattle.

A man's ignorance sometimes is not only useful, but beautiful-- while his knowledge, so called, is oftentimes worse than useless, besides being ugly. Which is the best man to deal with--he who knows nothing about a subject, and, what is extremely rare, knows that he knows nothing, or he who really knows something about it, but thinks that he knows all?

We had a remarkable sunset one day last November. I was walking in a meadow, the source of a small brook, when the sun at last, just before setting, after a cold, gray day, reached a clear stratum in the horizon, and the softest, brightest morning sunlight fell on the dry grass and on the stems of the trees in the opposite horizon and on the leaves of the shrub oaks on the hillside, while our shadows stretched long over the meadow east-ward, as if we were the only motes in its beams. It was such a light as we could not have imagined a moment before, and the air also was so warm and serene that nothing was

wanting to make a paradise of that meadow. When we reflected that this was not a solitary phenomenon, never to happen again, but that it would happen forever and ever, an infinite number of evenings, and cheer and reassure the latest child that walked there, it was more glorious still.

The sun sets on some retired meadow, where no house is visible, with all the glory and splendor that it lavishes on cities, and perchance as it has never set before—where there is but a solitary marsh hawk to have his wings gilded by it, or only a musquash looks out from his cabin, and there is some little black-veined brook in the midst of the marsh, just beginning to meander, winding slowly round a decaying stump. We walked in so pure and bright a light, gilding the withered grass and leaves, so softly and serenely bright, I thought I had never bathed in such a golden flood, without a ripple or a murmur to it. The west side of every wood and rising ground gleamed like the boundary of Elysium, and the sun on our backs seemed like a gentle herdsman driving us home at evening.

So we saunter toward the Holy Land, till one day the sun shall shine more brightly than ever he has done, shall perchance shine into our minds and hearts, and light up our whole lives with a great awakening light, as warm and serene and golden as on a bankside in autumn.

THE PROPER USE OF LAND

E F Schumacher

Among material resources, the greatest, unquestionably, is the land, Study how a society uses its land, and you can come to pretty reliable conclusions as to what its future will be.

The land carries the topsoil, and the topsoil carries an immense variety of living beings including man. In 1955, Tom Dale and Vernon Gill Carter, both highly experienced ecologists, published a book called *Topsoil and Civilisation*. I cannot do better, for the purposes of this chapter, than quote some of their opening paragraphs:

'Civilised man was nearly always able to become master of his environment temporarily. His chief troubles came from his delusions that his temporary master ship 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 the master of nature. He must conform his actions to certain natural laws if he is to maintain his dominance over his environment. When he tries to circumvent the laws of nature, he usually destroys the natural environment that sustains him. And when his environment deteriorates rapidly, his civilisation declines.

'One man has given a brief outline of history by saying that "civilised man has marched across the face of the earth and left a desert in his footprints". This statement may be somewhat of an exaggeration, but

it is not without foundation. Civilised man has despoiled most of the lands on which he has lived for long. This is the main reason why his progressive civilisations have moved from place to place. It has been the chief cause for the decline of his civilisations in older settled regions. It has been the dominant factor in determining all trends of history.

'The writers of history have seldom noted the importance of land use. They seem not to have recognised that the destinies of most of man's empires and civilisations were determined largely by the way the land was used. While recognising the influence of environment on history, they fail to note that man usually changed or despoiled his environment.

'How did civilised man despoil this favourable environment? He did it mainly by depleting or destroying the natural resources. He cut down or burned most of the usable timber from forested hillsides and valleys. He overgrazed and denuded the grasslands that fed his livestock. He killed most of the wildlife and much of the fish and other water life. He permitted erosion to rob his farm land of its productive topsoil. He allowed eroded soil to clog the streams and fill his reservoirs, irrigation canals, and harbours with silt. In many cases, he used and wasted most of the easily mined metals or other needed minerals. Then his civilisation declined amidst the despoliation of his own creation or he moved to new land. There have been from ten to thirty different civilisations that have followed, this road to ruin (the number depending on who classifies the civilisations)."

The 'ecological problem', it seems, is not as new as it is frequently made out to be. Yet there are two decisive differences: the earth is now much more densely populated than it was in earlier times and there are, generally speaking, no new lands to move to; and the rate of change has enormously accelerated, particularly during the last quarter of a century.

In our time, the main danger to the soil, and therewith not only to agriculture but to civilisation as a whole, stems from the towns- man's determination to apply to agriculture the principles of industry.

Now, the fundamental 'principle' of agriculture is that it deals with life, that is to say, with living substances. Its products are the results of processes of life and its means of production is the living soil. A cubic centimetre of fertile soil contains millions of living organisms, the full exploration of which is far beyond the capacities of man. The fundamental 'principle' of modern industry, on the other hand, is that it deals with man-devised processes which work reliably only when applied to man-devised, non-living materials. The ideal of industry is the elimination of living substances. Man-made materials are preferable to natural materials, because we can make them to measure and apply perfect quality control. Man-made machines work more reliably and more predictably than do such living substances as men. The ideal of industry is to eliminate the living factor, even including the human factor, and to turn the productive process over to machines. At Alfred North Whitehead defined life as 'an offensive directed against the repetitious mechanism of the universe', so we may define modern industry as 'an offensive against the unpredictability, un- punctuality, general waywardness and cussedness of living nature,

including man'.

In other words, there can be no doubt that the fundamental 'principles' of agriculture and of industry, far from being compatible with each other, are in opposition. Real life consists of the tensions produced by the incompatibility of opposites, each of which is needed, and just as life would be meaningless without death, so agriculture would be meaningless without industry. It remains true, however, that agriculture is primary, whereas industry is secondary, which means that human life can continue without industry, whereas it cannot continue without agriculture. Human life at the level of civilisation, however, demands the balance of the two principles, and this balance is ineluctably destroyed when people fail to appreciate the essential difference between agriculture and industry -- a difference as great as that between life and death -- and attempt to treat agriculture as just another industry.

The argument is, of course, a familiar one. It was put succinctly by a group of internationally recognised experts in *A Future for European Agriculture*:

Different parts of the world possess widely differing advantages for the production of particular products, depending on differences in climate, the quality of the soil and cost of labour. All countries would gain from a division of labour which enabled them to concentrate production on their most highly productive agricultural operations. This would result both in higher income for agriculture and lower costs for the entire economy, particularly for industry. No fundamental justification can be found for agricultural protectionism.

If this were so it would be totally incomprehensible that agricultural protectionism, throughout history, has been the rule rather than the exception. Why are most countries, most of the time, unwilling to gain these splendid rewards from so simple a prescription? Precisely because there is more involved in 'agricultural operations' than the production of incomes and the lowering of costs: what is involved is the whole relationship between man and nature, the whole life-style of a society, the health, happiness and harmony of man, as well as the beauty of his habitat. If all these things are left out of the experts' considerations, man himself is left out -- even if our experts try to bring him in, as it were, after the event, by pleading that the community should pay for the 'social consequences' of their policies. ...

On a wider view, however, the land is seen as a priceless asset which it is man's task and happiness 'to dress and to keep'. We can say that man's management of the land must be primarily orientated towards three goals -health, beauty, and permanence. The fourth goal -- the only one accepted by the experts -- productivity, will then be attained almost as a by-product. The crude materialist view sees agriculture as 'essentially directed towards food-production', A wider view sees agriculture as having to fulfil at least three tasks:

- ⊘ to keep man in touch with living nature, of which he is and remains a highly vulnerable part;
- ⊘ to humanise and ennoble man's wider habitat; and
- ⊘ to bring forth the foodstuffs and other materials which are needed for a becoming life.

I do not believe that a civilisation which recognises only the third of these tasks, and which pursues it with such ruthlessness and violence that the other two tasks are not merely neglected but systematically counteracted, has any chance of long-term survival.

The social structure of agriculture, which has been produced by -- and is generally held to obtain its justification from -- large-scale mechanisation and heavy chemicalisation. makes it impossible to keep man in real touch with living nature; in fact, it supports all the most dangerous modern tendencies of violence, alienation, and environmental destruction. Health, beauty and permanence are hardly even respectable subjects for discussion, and this is yet another example of the disregard of human values -- and this means a disregard of man -- which inevitably results from the idolatry of economism.

If 'beauty is the splendour of truth', agriculture cannot fulfil its second task, which is to humanise and ennoble man's wider habitat, unless it clings faithfully and assiduously to the truths revealed by nature's living processes. One of them is the law of return; another is diversification -- as against any kind of monoculture; another is decentralisation, so that some use can be found for even quite inferior resources which it would never be rational to transport over long distances. Here again, both the trend of things and the advice of the experts is in the exactly opposite direction -- towards the industrialisation and depersonalisation of agriculture, towards concentration, specialisation, and any kind of material waste that promises to save labour. As a result, the wider human habitat, far from being humanised and ennobled by man's agricultural activities, becomes standardised to dreariness or even degraded to ugliness.

All this is being done because man-as-producer cannot afford 'the luxury of not acting economically', and therefore cannot produce the very necessary 'luxuries' -- like health, beauty, and permanence -- which man-as-consumer desires more than anything else. It would cost too much; and the richer we become, the less we can 'afford'. The aforementioned experts calculate that the 'burden' of agricultural support within the Community of the Six amounts to 'nearly three per cent of Gross National Product', an amount they consider 'far from negligible'. With an annual growth rate of over three per cent of Gross National Product, one might have thought that such a 'burden' could be carried without difficulty: but the experts point out that 'national resources are largely committed to personal consumption, investment and public services.... By using so large a proportion of resources to prop up declining enterprises, whether in agriculture or in industry, the Community foregoes the opportunity to undertake necessary improvements" in these other fields.

Nothing could be clearer. If agriculture does not pay, it is just a 'declining enterprise'. Why prop it up? There are no 'necessary improvements' as regards the land, but only as regards farmers' incomes, and these can be made if there are fewer farmers. This is the philosophy of the townsman alienated from living nature, who promotes his own scale of priorities by arguing in economic terms that we cannot 'afford' any other. In fact, any society can afford to look after its land and keep it healthy and beautiful in perpetuity. There are no technical difficulties and there is no lack of relevant knowledge. There is no need to consult economic experts when the question is one of priorities. We know too much about ecology today to have any excuse for the many abuses that are currently going on in the management of the land, in the management of animals, in food storage, food processing, and in heedless urbanisation. If we permit them, this is not due to poverty, as if we could not afford to stop them; it is due to the fact that, as a society, we have no firm basis of belief in any meta-economic values, and when there is no such belief the economic calculus takes over. This is quite inevitable. How could it be otherwise? Nature, it has been said, abhors a vacuum, and when the available 'spiritual space' is not filled by some

higher motivation, then it will necessarily be filled by something lower -- by the small, mean, calculating attitude to life which is rationalised in the economic calculus.

I have no doubt that a callous attitude to the land and to the animals thereon is connected with, and symptomatic of, a great many other attitudes, such as those producing a fanaticism of rapid change and a fascination with novelties - technical, organisational, chemical, biological, and so forth -which insists on their application long before their long-term consequences are even remotely understood. In the simple question of how we treat the land, next to people our most precious resource, our entire way of life is involved, and before our policies with regard to the land will really be changed, there will have to be a great deal of philosophical, not to say religious, change. It is not a question of what we can afford but of what we choose to spend our money on. If we could return to a generous recognition of meta-economic values, our landscapes would become healthy and beautiful again and our people would regain the dignity of man, who knows himself as higher than the animal but never forgets that *noblesse oblige*.

Abridged version of Chapter 2 from Part II (Resources) of Small is Beautiful: Economics as if people mattered

GAIA'S WILL

The Dying Declaration of Mother Earth

Manu Kothari and Lopa Mehta

On the agony of Mother Earth and her Dying Declaration

In the midst of her sufferings, may be despite it, her heart bleeds for her most cherished, and alas the most mischievous child, the human being. This is Mother Earth's last-ditch, desperate attempt to awaken the higher self of humans to their betterment and to achieve her own salvation.

Man has ravaged Mother Earth to the point of threatening his own survival. Man once again, is positioned to be Earth's savior through the distinct, inescapable possibility of shifting his gears from being Earth-destructive to being Earth-friendly.

In order that the contents may strike a chord with the heart as much as with the mind, the whole text is written in the form of a narration wherein Mother Earth is directly addressing her human children. The pathos and the pleadings of Mother Earth cannot go unheard. (The 'I' and 'Me' in the text refers to Earth).

On the affect of dams on the environment

The circulatory system responsible for moving my life fluid has been concretely compromised by dams. The volume of circulating water has been depleted through a thoroughly anthropocentric overuse that has left behind dry wells, shallow aquifers and parched riverbeds. Your pollutants have converted the pristine Ganges into a huge gutter – a fate that has spared no river.

On the other hand, the oxygen-manufacturers, the trees, are lost at a phenomenal rate.

Basically my cyclic, rhythmic working has never necessitated my having an excretory system, for the words waste and excreta do not exist in the gaian vocabulary. That is why my waters in their pristine state are crystal clear despite an enormous fecal output from so much life that thrives in water. My densest jungles are no Augean stables despite rich wild life. Waste, garbage, toxins, nuclear leftovers all of your making, have spawned (NIMBY) Not in My Back Yard, a globally necessary repellent.

The Red Indian Chief Seattle's prophesy that the White man will drown in his own excreta has come true for all men – White, Brown, Black or Yellow. That is "Progress"!

On the IQ concept

The target population I am addressing and to whom I bequeath my WILL is the common, not-much-learned, everyman. My avoidance of the experts, the elite and the scientist arises from their limited number and their expertismic befuddledness. Notable scientists experts huge gaps in their very basic knowledge about their milieu. Scientists, especially when they leave the particular field in which they have specialized, are just as ordinary, ignorant and unreasonable as anybody else, and their unusually high intelligence only makes their prejudices all the more dangerous.

The overrated IQ concept has spawned far more clever and cunning rather than wise and good people. IQ often stands for Idiocy Quotient.

Lewis Thomas, a medical biophilosopher has concluded that the greatest discovery of the twentieth century is human ignorance. "We are ignorant," Thomas avers, "About how we work, about where we fit in, and the most of all about the enormous, imponderable system of life in which we are embedded as working parts. We do not really understand nature, at all". The fable of the goose that laid the golden egg is too much for the average modern man to understand. Modern man deserves the epithet Homo

imbeciles.

On the way we treat the Earth

The defensive in favour of myself not being a freak could rest. Right now, you have assumed the role of the judge, the jury, and the executioner and I have no other recourse than to appeal to your better sense. The legal maxim is to let 100 criminals go scot-free, but not to punish an innocent person. I think, I hold, and I plead that I am innocent and do in no way merit the harsh punishment unremittingly meted out to ME. You hang ME and with that the thread of Damoclean sword will snap and you will be no more. It is time to acquit ME honourably. Even if no damages are granted, please grant ME some breathing time, and I shall limp back to my pristine glory.

On a new meaning to the term 'Wealth'

The term wealth (weal + th) is a well-conceived, almost sacred term. Weal derived from Old English/Old Saxonian / Old High German / West German root, connotes the public good, the general good, the welfare of a country or community, in the sense of Latin *bonum publicum*, or French *le bien publique*. The suffix-th indicates the quality or condition. Wealth is pregnant with the emphasis on commonweal, commonwealth, community, wherein common implies “belonging equally to two or more.” It means distinction-free fraternity, equality and emanating there from, liberty. How many countries deserve the appellation wealthy? We have lexicons after lexicons, first glowing bright over weal and then descending to the pits by rendering obsolete the pristine meaning of wealth and making it synonymous with affluence, possession, riches, material objects, property, or anything that has money value.

The coal-miner gives the coal and the farmer provides the food, which comprise the usable WEAL. All the terrestrial or marine food-pyramids are integrated, interflowing WEAL units. Life, at all levels, is just configured WEAL, from earthworm to Erasmus, baleen whale to Buddha, virus to Voltaire or mycroplasma to Mahatma Gandhi.

About God Incarnate

In case you are searching for God incarnate that runs the entire earthly show, go and worship a blade of grass and the green that floats on the surface of river, lake or sea.

In the oceans, as on land, the whole animal kingdom depends on the plant kingdom for food.

“There are millions of species of plants – from the giant oaks and redwoods, through beautiful orchids to humble grasses. But globally one group of plants is far more important than all the other types put together. These are the algae – singular alga – simple plants, which usually live in water. Seventy per cent of the world’s surface is sea, and nearly all sea plants are algae. Most importantly, algae are responsible for producing the very air that we breathe. Oxygen is given off as a by-product during photosynthesis, and by far the largest source of oxygen in the world is the billions of minute algae in the sea.”

On Reverence for Life

First and foremost it is your ignorance of this splendor, your absence of any sense of wonder and hence of reverence, that are the very basis of your wanton destruction, defilement, and despoiling of this magnificence of mine. The poverty of your mind spells the poverty of my body.

England’s Professor Raeburn’s prophesy that the future generations will see antibiotics as a malicious trick played by Nature on mankind, may be appreciated from the fact that infections in a modern hospital – now distinctly categorized as Hospital Infections – are called DOMP – Diseases of Medical Progress. These powerful antibiotics drive away the normal bacterial flora and invite super infections to set in. Transplants and implants put into human body so compromise the host that the friendly flora are forced to turn into foes.

I think I shall never see
A poem lovely as a tree.
Poems are made by fools like me,
But only God can make a tree.
Alfred Joyce Kilmer

On excessive waste of paper and ink for Journals

I am trying to get things clear: Is it litter that you are seeking or literacy? You have convinced yourself that if you just have more to read – journals, books and now tapes – you will be a better man. In this mad equation where information passes as knowledge, it is degrees for you, and death by degrees for ME. Thousands upon thousands of trees must vanish as a routine to metamorphose into your trivia-laden dailies and periodicals, also entailing the use of many tons of toxic ink and colours to educate, nay, entertain you. As compensation, they try to tell you how I am being ravaged. Do not forget that the

countries with the largest number of universities, libraries, books, papers and periodicals, also are countries fond of colonizing war-mongering, and polluting.

On needs versus wants

The neon-signed, power-hungry city dwellers who use electricity for whatever they do, the industrialists busy making things which everybody could do well without, and the planners of “progress,” dam India’s venerated life-giving rivers, thus inundating on one side and parching up the other. The results are loss of WEAL production that gives food and meaning to the rural poor, forcing them to migrate to cities, plenitude of food compromised for ever with resultant increase in prices, colossal loss of trees, tragic loss of land-regeneration because of siltation, and so on. Hydel projects are the supreme example of a man-of wants driving a spoke in my wheels to deny the needs of all others. It is estimated that more than 85% of India’s GNP – of industrialized India – can be afforded only by 5% Indians. The wants of 5% deny the needs of 95%. Industrial pollutants, vehicular exhaust, plastic pollution are other instances of wants smothering needs. Whenever a multi-storyed building in Mumbai gets centrally air-conditioned, the ambient air enveloping the surrounding poor shoots up its temperature by a few degrees.

Before-Christ era we had Taoism, Jainism, Buddhism, the concept of God-in-everybody and everything. The 20th century A.D. has given us Hitler, Stalin, Mao, atom bomb, smog, and garbage-alps that you do not know what to do with.

Your mad, unchecked rush for multiplying wants is rooted in your thoughtlessness. The endless array of arms, ammunition, dyes, chemicals, toxins, plastics is of things that you relentlessly and thoughtlessly make and discard and dispose equally thoughtlessly. In your search for a synthetic Heaven bursting with glint and gloss, you have let loose a Frankenstein of uncycleable Hell.

On Education

There are numerous favorite notions of mankind whereof the doubtful good is taken for granted, and the often certain harm is ignored, glossed over, denied, or euphemistically glorified – e.g., morality, religion, fidelity, obedience, celibacy, honour, our God, service-to-humanity, and so on. Education is one such hallowed activity bristling with violence and hubris, and yet so sanctified that in most Third World countries it takes precedence over milk for the starving children and hay for the dying cattle. Such

education pampers the vanity of the few who can afford it, and socially degrades the degreeless many who are denied a place in the paper chase.

On Gandhi

He was the only one among all leaders who practiced, what he preached. All other have been squandrels of the first order.” So you see how “a private citizen without wealth, property, official title, official post, academic distinction, scientific achievement, or artistic gift,” “the little brown man in a loincloth” as Louis Fischer described him, continues to live in the hearts of men. Gandhi, Christ, Buddha educated by leading men from darkness to light, from confusion to clarity, from hatred to love, in short, from mere humanness to manifest humaneness all by personal example, even at the cost of their own lives.

On Science and Technology

What is Science?

From the fairly confused history of the term science, as avails in any leading lexicon, I am forced to conclude that to you mankind, science has meant whatsoever you found suitable for your fads and fancies.

Technology is a totally different ball game. In contrast to the universality, cosmicity of science, technology is parochial in its aim. Towards achieving an anthropocentric want, it demands power, exploits/ravages ME for material, manufactures pollution and ends up creating a thing that the never-satisfied humans junk to clog ME (Mother Earth) and pollute ME all the more. Technology cannot make a single item that you need. It can only create what you want, including wanting itself. And that, my dear, is my prime worry. The technology of your wants has been, is, and will forever be, blind to the science of your needs.

On Handling of energy

What biologists, scientists, doctors, dictionaries, learned people or lay call food, caloric requirement, energy and so on is governed and guided by life’s lust for life, life’s penchant for assimilating another life, life’s readiness to be assimilated by another life, a cycle as ceaseless as that of the winds and the

waters.

Nothing epitomized the infirmities of the Indian science and technology establishments as the failures of the atomic energy programme. The most pampered department of the Government also remains the ugliest face of the S&T establishment.

For example, you are depleting fossil fuels at a rate 100,000 times faster that they are being formed. “Little of the world’s petroleum is likely to remain by the bicentennial of the world’s first oil well in the year 2059.” You have been as profligate with coal, as with wood. You seem to have clean forgotten that no matter what you burn, you are burning a part of ME. You are diminishing ME: Your radioactive waste has compromised irrevocably with the quality of my ambience. With a few more nuclear plants and a few more Chernobyls, you could finish ME off forever.

About our understanding (Or misunderstanding) of Economics

The three terms, *ecology*, *economy*, and *ecumenic* are rooted in Greek *Oikos* = house, and respectively emphasize earth and environment, money and commodities, and human beings and Christian churches. The lexicons also synonymize economy with thrift, frugality verging on parsimony, efficiency, cautiousness, non-redundancy. And yet, economy seen as production, distribution and consumption of goods, commodities and monies is at loggerheads with ecology, the desperate bid to save ME and the environment. In the bargain, mankind itself doesn’t seem to matter; the churches have been so bothered about their religious propriety that ME has not found a place in their ethos.

Economy/economics has rationalized “maximizing behavior” whereby the consumers maximize their sense of satisfaction and utility, and entrepreneurs their drive for profit and expansion. If towards that the most uneconomical use of power, raw material advertisements, air, water and even food-giving land requires to be made, so be it. And all this for a sole species, man – an unreproachable ecumenical approach. Through this lop-sided tug of war, in which ecology pulls on one side and ecumenics and economics on the other, a compelling perspective is rendered clear: Ecology comprises the earth and environmental forces that manufacture needs for all life, including man. Man hubristically channelizes these forces to deny the needs, and therefore the right to exist, of all other non-human species and in return creates goodies and so-called wealth, that are inherently incapable of providing innate

satisfaction.

You have just enough religion to hate each other, but not enough to love each other Your religiosity – all of your making – has been, as yet, the chief reason for the metamorphosis of the *Homo sapiens* into the *Homo maniacus*.

Your becoming, making, having lead to INFLATION. While your ace economists go into contortion and convulsions before they manage to confuse this term, let me spell out in some simple words the same.

Your manufacture of wants interferes by encroachment and defilement more with my manufacture of your needs. Wants – material goods, and money – go up, food and water go down. More money, less food. The price of bread, of butter of water goes upto INFLATION.

Urbanizing of gaia: city

Civilization is a brainchild of cities, or unbanization, of freedom from work. However, well intentioned the proposition, it cannot escape a certain high-browism. The pejoration villain is a direct outcome of this civilized superciliousness. From *villa*, farm were derived *villanus* = a farm servant, and village. Villain, then, connoted a person not from city, being uneducated, uncultured, and thus a rascal, wicked and worthless. And hence, over the centuries, the exodus to the cities, the ruthless expansion of the cities, the urbanization of ME.

Now look at it another way. If, a minority liberated from economic activities is an identification-mark of civilization, how come the very cities that were, ostensibly, the birth-place of civilized societies, progressively turned into cesspools of cement jungles, shopping malls, traffic jams, noise, pollution, murk, filth, tarred ground, foggy ambience, and hazy skies?

The multinationals that are busy clearing the Amazonian forests so that beef can be raised for the ravenous haves, must have been guided by the decisions arrived at, in 5-star hotels or offices. The ecological violations in India are basically forged in the “idyllic” offices of the ministers at the Centre or the State, all of course for a consideration provided by the mighty industrialists.

Beyond you and yet not beyond you

In Vedic parlance, you ARE, Sat, Chit, Anand. This reality is beyond you in two ways – it's unhelpably, unavoidably, you, and you are largely ignorant about this in-built greatness of yours. I want to awaken your sense of self-reverence in the hope, and with the conviction that from thereafter you will learn to revere life in general, and ME in particular.

When the trajectory of the body is complete, it dies, not you. Your eternal et infinite self is beyond the confines and caprices of space and time. Believe it or not, you are as cosmic, universal and eternal as any god you may have worshipped.

On the inheritance of Earth

You may be the pinnacle of Darwinian design, the most evolved animal the seeming master of whatever your survey. However you have proved too clever for your own good Aren't you responsible for my having to make a dying declaration?

The prophesy that the meek shall inherit the Earth is more a plea than a pronouncement. It is a gentle reminder to the mighty human species the ME and my elements can tolerate you only to a point. You are my most recent offspring. You need to exercise caution so that firstly ME, and through that you survive to look forward to a future that you seem to be denying to yourself, and more so to your children, and all other forms of life.

(Excerpts selected by M. R. Rajagopalan, Trustee, Gandhigram Trust, Gandhigram - 624302)

FIRE & ACCOUNTING

A Thought Mailer for the Bombay Chartered Accountants Society

Mansoor Khan

(Deeply inspired by Charles Eisenstein's books *The Ascent of Humanity* and *Sacred Economics*)

Today's reality is governed by the laws of economics and accounting has therefore become a key discipline in developing and maintaining our modern industrial world. Balance sheets, ledgers, costs and sales all lead to the final profit and loss statement that is supposed to tell us whether an enterprise was worthwhile or not. We constantly need to make sure that we have accounted for all input costs and that their sum is less than the output price. Or else we would have to use some of our savings to run the show. And spending your capital is a taboo in economics. So accounting has a responsibility towards the very survival of the enterprise. Let us see how accounting has fared through history.

To trace this history we will start with fire. Sometime in the distant past one of our ancestors lit the first intentional fire, thereby releasing a burst of heat and light. This act was to mark our species as the dominant one – the power was undeniable – and Homo sapiens came to rule the world.

Soon fire was celebrated as our most glorious achievement – a techno-evolutionary leap. By setting fire to a piece of wood we could now release a hundred years of sunlight in a flash. No other animal has the ability to light a fire intentionally and then use it to heat, cook, corner animals on a hunt, clear undergrowth, melt, smelt and modify the world. Actually we are dipping into a savings capital by using wood to create a fire, but the obvious advantages of releasing and using this source of stored energy were irresistible. Then again, the first accountant was not born yet. So no one paid any attention to the deficit being created by this action – the four letter word for which is 'burn'. And burning was to become the defining trait of our culture called Civilization.

So starting with burning hundreds of years of sunlight capital, we later made the leap to coal, which opened the door to thousands of years of more capital burning at a go. The fire burned higher and a stunning surge of projects became possible, changing lifestyles and landscapes. Trumpeted as the beginning of the modern industrial world, this new trend changed the very landscapes of our minds.

And unknowingly we became devotees of a new religion – Growth. Thousands of years of sunlight capital combined with irreplaceable NATURAL CAPITAL like iron, copper, stone, sand, minerals etc. bloomed into the machines, railways, bridges and factories glibly called 'fixed assets' on our balance sheets. No substantial entries were made to account the real cost of these inputs.

Burning any capital at a deficit, without accounting for it, is an accounting sacrilege. Yet it was permitted as the perks were stunning. We added unimagined comfort to our lifestyles and simultaneously accrued a deficit of hundreds of thousands of years of unaccounted sunlight capital, burnt at the altar of growth. This became an acclaimed habit. We dubbed it progress. And the fire rose higher.

But the star of this combustion show was yet to arrive. In 1859, we found the keys to a sunlight capital account that had been accruing for hundreds of millions of years. It was oil. With oil we graduated from burning hundreds to thousands to millions of years of sunlight capital at a go. Burning this density of sunlight capital was like firing a thruster rocket for our industrial world. The fire was now an inferno and economic growth took an exponential curve up towards the sky. Along with it went our heads, into the clouds, as we lost the connection between value and measure, natural capital and money, reality and concept, body and mind. We convinced ourselves that it was not the stored solar energy capital of our Earth's body, burnt at a huge deficit, that was making growth possible, but our ideas – mere constructs of our mind.

The most lethal of these ideas was a symbolic construct called money. A representation of value but not value in itself. A lubricant for growth at best. We blinkered our accounting practices accordingly.

We established that the price of the sunlight capital should only be what it cost to extract it”? We never accounted for what the real cost would be if we ever needed to replace the burnt capital”?

This, anyway, was impossible. Burning 1,000 years of sunlight capital per minute for a drive to the grocers and showing it as a viable expense against even an eight digit salary is a serious accounting fraud. But then, were we accounting?

What we were in fact performing was a neat sleight of the mind. We had swapped real capital for a symbolic concept called money. So all we had to do was account for the money and not the real and irreplaceable capitals used which are energy and resources. Even worse, concepts have a tendency to morph into more concepts to form new economic laws. So ‘money represents value’ morphed into ‘money has time-value’ therefore the statement ‘money must grow’ became a law. And again this law morphed into ‘this growth must compound’. So money MUST grow exponentially although even a child knows that on a finite planet the supporting energy and resources don’t behave that way. But who was asking children anyway?

Having committed ourselves to exponential concepts, we were compelled to fuel the fire and make it rise ever higher, ever faster. New forms of capital were needed to do this. What got sucked into the flames this time was the irreplaceable ECOLOGICAL CAPITAL of the wild – the fertility of soils, life-sheltering forests, life-supporting rivers, the magical web of species and bio-diversity at large. They all disappeared into the funnel of the economic engine, running on borrowed solar capital, only to emerge with triumphant aplomb on waiting spreadsheets as Gross Domestic Product. Had anyone made an entry in any balance sheet for these ecological input costs? Certainly not, because voicing this was considered an anti-establishment act. You would be deemed a luddite, an obstructionist, a doomer, a tree-hugging environmentalist or even worse – a mere resentful failure.

Yet, reality maintains its own balance sheet way beyond Excel. It painstakingly and non-umerically tallies the accumulating deficit. And that deficit made itself evident through drying rivers, degraded soils, disappearing forests, dipping aquifers, diminishing bio-diversity, species extinction and other signs of fading life. This was the loss of a unique aspect of the universe called QUALITY that we never bothered to account for, in our obsession to account only for QUANTITY. In fact, the realisation that quality is beyond conventional accounting became clear when we made desperate attempts to include this loss in conventional balance sheets under the guise of environmental studies and eco-economics.

Meanwhile, the economic flames were licking the clouds and demanding to be fed. Trapped in our tenets of compounding the time-value of money, we were obliged to find new kinds of capital to throw into the fire to keep it rising.

The new kind of capital that was burnt was SOCIAL CAPITAL – the bonds between family members, friends and local acquaintances. Everyone had to sacrifice their personal bonds, relationships and leisure to attend 9 to 5 jobs and punch the clock on single-day weekends. ‘Time is money’ was an immutable law by now. No more football with the boys in the evening, a casual game of rummy at the club, the

unexpected drop-in at the neighbour's house. The burning of these social bonds was more urgently needed by our office or enterprise to stoke the ever rising fire of profitability and growth. And what did that cost us? Well we could answer that if only we knew how to account a relationship, a smile, a quiet evening with our family and place it as a number on a spreadsheet. Let us just say we accounted for it with a suitable raise in the salaries or annual bonuses. Immeasurable quality compensated by finite quantity. Once more, the deficit popped its ugly head in the form of overworked, depressed workers, high-rates of suicides, dysfunctional families, rampant divorces, and untended, wayward youth.

The inferno moved relentlessly to engulf the next kind of capital, called COMMUNITY CAPITAL. Stories, ideas, words, phrases, songs, tunes and other community intellectual property were snatched from the public commons to be converted and privatised into financial capital. Once shared and enjoyed by all, they were now out of bounds. For none to use or you would be sued. Impoverishing all for the gains of a few. And did we account for that loss to the community? No because communities don't keep ledgers, only companies do.

And finally, in the last rounds of keeping the fire from flagging, we burnt SPIRITUAL CAPITAL – virtues like honesty, faith, integrity and trust between people and communities. And suddenly, telling half lies to sell a product was a fine art called advertising. Coercing unwilling workers to stick to their job at a low salary was dubbed management. Statesmanship was reborn as politics. Raping everything in sight was now masquerading as the euphemism 'exploiting', echoed proudly in boardroom meetings as 'exploiting markets' and 'exploiting resources'. Did any spreadsheet account for the price paid to lose these virtues of spiritual capital? This is a silly question because, in fact, the spreadsheets were achieving record profits based on the very loss of these virtues. The number of scams these days bear ample evidence to the loss of this form of capital.

And now, it is time to tally our accounts. We find that the fire we started 10,000 years ago has consumed just about every form of EARTH CAPITAL we could imagine. Nothing left to burn and the flames of our economic growth are flagging. The evidence is in the unravelling of the multiple crises that we wilfully bred in our hollow accounting systems. The 2008 global financial collapse, the Euro crisis, the energy crunch, the high food prices, the collapsing industries, the disappearing jobs, the resource wars, the falling water tables, the poisoned soils, the melting glaciers, the drying rivers and above all, a warming globe – they all stem from the same root cause: the deficit caused by burning real Earth capital, powered by the pseudo-accounting of a symbolic capital called money. And that, dear readers, is not accounting at all.

Modern Economics with its false tenet of perpetual growth is the culprit. However, its strongest ally has been Accounting. It is time to do some real accounting, called Energy Accounting, before the fire consumes us all.

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WAITING FOR A GENIUS

Lu Hsun

A lecture delivered to the alumni of Beijing National University's middle school on January 17, 1924

I am afraid my talk will be of no use or interest to you, for I really have no special knowledge; but after putting this off so long I have finally had to come here to say a few words.

It seems to me that among the many requests shouted at writers and artists today, one of the loudest is the demand for a genius. And this clearly proves two things: first, that there is no genius just now in China; secondly, that everybody is sick and tired of our modern art. Is there really no genius? There may be, but we have never seen one and neither has anyone else. So judging by the evidence of our eyes and ears we can say there is not — not only no genius, but no public capable of producing a genius.

Genius is not some freak of nature which grows of itself in deep forests or wildernesses, but something brought forth and nurtured by a certain type of public. Hence, without such a public there will be no genius. When crossing the Alps, Napoleon once declared, "I am higher than the Alps!" But we must not forget how many troops he had at his back while making this grandiose statement. Without these troops he would simply have been captured or driven back by the enemy on the other side; and then, far from seeming heroic, his behaviour and boast would have appeared those of a madman. To my mind, then, before we expect genius to appear, we should first call for a public capable of producing a genius. In the same way, if we want the trees and lovely flowers we must first have good soil... The soil actually, is more important than the flowers and trees, for without it nothing can grow. Soil is essential to flowers and trees, just as good troops were to Napoleon.

Yet judging by present day pronouncements and trends, the demand for genius goes hand in hand with attempts to destroy it — some would even sweep away the soil in which it might grow. Let me give a few examples.

First, take "restoring our national culture." Although the new ideas have never made much headway in China, a pack of old men — young ones too — are already scared out of their wits and ranting about our national culture. "China has many good things," they assure us. "To run after what is new, instead of

studying and preserving the old is as bad as renouncing our ancestral heritage.” Of course, it carries enormous weight to trot out our ancestors to make a point: but I cannot believe that before the old jacket is washed and folded no new one must be made. As things stand at present, each can do as he pleases: old gentlemen who want to restore our national culture are naturally at liberty to pore over dead books by their southern windows, while the young can have their living studies and modern art. As long as each follows his own bent, not much harm will be done. But to rally others to this banner would mean cutting China, off for ever from the rest of the world. To demand this of everyone is even more fantastic! When we talk with curio-dealers, they naturally praise their antiques, but they never berate painters, peasants, workers and the rest for forgetting their ancestors. The fact is they are far more intelligent than many traditional scholars.

Then take “extolling original work.” Looked at superficially, this seems quite in keeping with the demand for genius; but such is not the case. It smacks strongly of chauvinism in the realm of ideas, and thus will also cut China off from the current of world opinion. Although, many people are already tired of hearing the names of Tolstoy, Turgenev and Dostoyevsky, how many of their books have been translated into Chinese? Those who look no further than our own borders dislike such names as Peter and John and will only accept Zhang the Third or Li the Fourth, and so we get original writers. Actually, the best of them have simply borrowed some technical devices or expressions from foreign authors. However polished their style, the content usually falls short of translations, and they may even slip in some old ideas to suit the traditional Chinese temperament. But their readers fall into this trap, their views becoming more and more confined, until they almost shrink back between the old traces. When such a vicious circle exists between writers and readers for the abolition of all that is different and the glorification of the national culture, how can genius be produced? Even if one were to appear, he could not survive.

A public like this is dust, not soil, and no lovely flowers or fine trees will grow from it.

Then, again, take destructive criticism. There has long been a great demand for critics, and now many have appeared. Unhappily, quite a number of them are carpers rather than critics. As soon as a work is sent to them, they indignantly grind their ink and lose no time in penning a most superior verdict: “Why, this is too childish. What China needs is a genius!” Later even those who are not critics learn from them and raise the same clamour. In actuality, the first cry of even a genius at birth is the same as that of an

ordinary child; it cannot possibly be a beautiful poem. And if you trample something underfoot because it is childish, it is likely to wither and die. I have seen several writers reduced to shuddering silence by abuse. There was doubtless no genius among them, but even the run-of-the-mill I would like to keep.

Of course, destructive critics have great fun galloping over tender shoots. The ones to suffer are the tender shoots — ordinary shoots as well as shoots of genius. There is nothing disgraceful in childishness, for childishness and maturity in writing are like childhood and manhood among human beings. A writer need not be ashamed of making a childish start, because unless trampled underfoot he will grow to maturity. What is incurable is decadence and corruption. I would let those who are childish — some of them may be old people with childlike hearts — express themselves in a childish way, speaking simply to please them; and when the words are said or even published, there let the business end. No attention need be paid to any critics, whatever banners they carry.

I dare say nine-tenths of the present company too would like to see a genius appear. Yet as matters stand at present, it is not only hard to produce a genius but also hard to have the soil from which a genius could grow. It seems to me that while genius is largely inborn, anyone can become the soil to nurture genius. For us to provide, the soil is more realistic than to demand the genius; for otherwise, even if we have hundreds of geniuses they will not be able to strike root for lack of soil, like bean-sprouts growth on a plate.

To be the soil we must become more broad-minded. In other words we must accept new ideas and free ourselves of the old fetters, so as to be able to accept and appreciate any future genius. We must not despise humble tasks either. Those *who* can write should naturally do so; others can translate, introduce, enjoy, read, or use literature to kill time. It may sound rather odd to speak of killing time with literature, but at least this is better than trampling it underfoot.

Of course the soil cannot be compared with genius, but even to be the soil is difficult unless we persevere and spare no pains. Still, where there's a will there's a way, and here we have a better chance of success than if we wait idly for a heaven-sent genius. In this lies the strength of the soil and its great expectations, as well as its reward. For when a beautiful blossom grows from the soil, all who see it naturally take pleasure in the sight, including the soil itself. You need not be a blossom yourself to feel a lifting of your spirit — provided, always, that soil has a spirit too.

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