If Trees Could Vote

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If trees could vote, every good forester could be elected President. But what about people?

In all the problems of man in relation to his environment we recognize that the ultimate solution is an acceptable way of limiting the total population on earth. In the meantime, however, each of us in his sphere must strive by his skills to bring man into harmony with his environment.

Developers of sprawling city complexes have committed tree murder, it is true. But when will the foresters come out of their forests and work in and near the cities, where the people are, to take trees to the city? Conversely, foresters who now recognize the multiple uses of land must look forward to the time when concentrated optimum size cities—not too big and not too small—will be placed in the forest lands, in the wildernesses where people can live in harmony with nature, yet enjoy the society and stimulation of fellow humans.

Foresters, it seems, must broaden their outlook and concern themselves with total environmental quality. It is the same problem of coordination that we have in the transportation business. In 1910 the railroaders made the mistake of confining themselves to the railroad business. Had they conceived they were in the transportation business at that time we might have far better coordinated transportation today.

Just being near a tree or seeing it is uplifting and lends a sense of human dignity. Can you imagine a riot in a forest? All animals live in a precarious, delicate balance with all green plants that provide photosynthesis. Perhaps like biological rhythms that we carry from evolutionary dependence on the rhythms of moon, tide, and sun, we have an innate recognition of our dependence on green plants which makes us love them.

A tree grows in Brooklyn, you remember, yet now with 50 percent of our population living on one percent of the land, more and more people are seeing fewer and fewer trees. This does not mean that foresters are not expertly growing enough trees for the wood that we need, but trees are not being grown where people are, for the woods that they need.

It is not sufficient for foresters and silviculturists to breed a few trees that are resistant to the pollution of the city. They must identify themselves with other scientists and engineers and take part in the total ecological battle, and as man is the chief enemy of trees this necessarily involves carrying the battle to where man is. To breed a tree that is resistant to pollution is a temporary expedient and in the long run as wrong an approach as those who say that people will adapt themselves to the filth, noise, and other degradations of some city areas.

In attacking the pollution problem, we now know that we must strive to control it at its source, and that the ultimate cure of pollution is to reuse what we now call wastes.

Recently, agricultural scientists have found that they can feed cattle on cellulose, with no protein in it, by the addition of urea and vitamins. The future vista must be a pleasant one to foresters. We can dream of a factory where old newspapers go in one end and meat and steaks come out the other.

Should not foresters cooperate with this kind of scientist?

Is there not a relationship between the sturdiness and economical entropy relationships of mixed words and thickets that grow in difficult lands such as the tropics, and mixtures that could bring greenery to city dwellers? Is there not too much emphasis on manicured parks and not enough on the natural beauty of a thicket.

Tropical agronomists are now turning to husbanding the wild ruminants of the tropics as a way of gathering the mixed plant food there—the mixture which grows best in those regions where there is very little humus.

Trees to Combat Pollution

It seems to me that foresters could bring a wealth of help and experience to city planners to show how trees may clean the air, to talk about thickets versus manicured parks, to apply their attention to little bits of green scattered everywhere versus big bits of green with nobody or few people in them. Even to the value of marshes and meadows versus lawns.

To prevent the murder of trees and preserve the ration of man to green land.

Cities by their very existence change their own
climates. Air conditioners pump heat out of buildings and dump it in the streets, raising already high summer temperatures. Trees in the city not only can reduce these high temperatures by providing bigger radiating surfaces, but can ameliorate city climate in both summer and winter. From a temperature point of view, one can compute what the ratio of green land per capita in a city should be to keep the temperature rise to any accepted level. The same trees would go far toward reducing the excessive noise in cities which a Harvard physician has reported now sometimes exceeds the allowable levels in factories.

The same trees in cities will screen out dust.

Think of this great sprawling megalopolis stretching from Boston to Washington, the city now called Bosnywash. Let us accept the fact that every city needs natural space around it for people’s recreation and that this recreation of people during their lives is as important to their living as their shelter and the food they eat. In this context, the green spaces in northern New England, the Adirondacks, and Appalachia, are wonderful areas, as are the sea, the bays, the seashore and the estuaries on the eastern side. There is much talk of industrializing Appalachia. It seems to me that Appalachia is one of the most pollution prone areas in the United States—stagnant anti-cyclones frequently hang over it, and that is why the terpenes created the smokies long before man introduced his own pollutants. It seems, therefore, that the industry for Appalachia that would re-create its beauties and serve people most would be the industry of recreation. Foresters are a key in pushing this plan.

Foresters can show how forests can both be used for the wood people need, and for the woods they love.

**The Experimental City**

On the other hand, while we all recognize what needs to be done immediately for the existing cities, we must look to the future, and in this connection I have suggested the building of experimental cities that might be dispersed all over the face of our beautiful land. These cities would be controlled in size so that the land around them would be preserved, conserved, and reserved against further building. Modern technology in these experimental cities of the future would control waste at the source, control noise, and have no vehicles at ground level where people’s feet tread. All services, emergency vehicles, noxious gases, and waste heat would be handled in a substructure below ground level. Noiseless, modern mass transit would be above ground level so that even in the intense living city there would be a whole carpet area at ground level where people could walk among green things.

With this kind of a city, there would be no need for zoning; homes, schools, and factories could all be close together because of the absence of the filthy pollutants and noise which now cause us to adopt the practice of zoning which in essence represents the failure of the existing cities. With pollution controlled at the source, waste heat carried out to processing plants outside the city, and the multiple reuse of water, this would be a clean city which could stand in the middle of a productive forest. It is with this kind of cities built from scratch that we can disperse our people and restore the harmony in the relationship of people and green things.

To preserve the total quality of the natural environment, we must think of pollution in a broad sense. Pollution would then embrace all the ills of a city. Using disease as an antonym for ease, R. K. Cannan has spoken of a different kind of disease from environmental pollution. In this context, “disease” embraces the psychological insult to psychological insult to aesthetic sensitivity that even a perfectly sanitized junkyard presents. Filthy environments may make us mentally ill before they make us physically sick.

**Distributing Our Population**

People concentrate in cities to escape the rigors of climate and to maximize social, business, and cultural contacts with others with a minimum of travel. But when cities grow too large, the urban climate deteriorates to such an extent that people flee. Like the nomadic peoples of primitive times who moved with the seasons, they travel far to live in the uneasy compromise of suburbia. In the summer, the power stations of the cities exude waste heat, the buildings prevent breezes from carrying off fumes and heat, and air conditioning pumps heat from the buildings to the streets to aggravate the situation further.

If the 100 million people that represent half the population of the United States today lived in the same high density as they do now, but were dispersed in 800 smaller concentrations of 250,000 apiece, many of the ills of present overgrown cities would not exist. We need urban dispersal as well as urban renewal.

It has been said that the last frontiers of green wooded vistas are in isolated and inaccessible areas. This need not be if we distribute our cities and control their size because today no area on earth is inaccessible. This is going to happen—and foresters should not stand by and deplore, but should take part, give of their knowledge and wisdom so that what may come about is best for people and trees.

We could then have cities where trees and people grow together. In such a city, built from scratch, it is not out of the question to have reused water, carrying nutrients in suitable underground pipes to automatically supply the needs of the trees. In this, foresters must work with engineers, with lawyers, with

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AMES FORESTER
The Forester's Role: Multiple Use

Foresters can lead the way. They have shown how to control and reduce disasters by fire, and how to replant after such disasters. Great stately trees, the biggest plants in the world, are akin to the smallest plants in the world, the phytoplankton in the ocean, in their service to man. Both turn the energy of sunshine into the kind of energy that is assimilable by man and other animals. We all remember the Torrey Canyon disaster when oil from the tanker destroyed vast quantities of wildlife on the shores of England and France. An eminent biologist has estimated that had the Torrey Canyon contained an equal quantity of herbicide, it would have stopped all of the photosynthesis in the North Sea—equivalent to a kind of a fire burning up all the tiny green phytoplankton that provide the basic requirements for life itself.

The green plants of the ocean provide almost three quarters of the conversion of carbon dioxide back to oxygen that we need to breathe. Forests and trees play a large part on land. This biologist warned that with concrete highways, cities and airports diminishing the green on land each year, and with the possibility of toxic materials reducing the photosynthesis in the sea, we might actually run out of oxygen.

Just as industries must become quiet and clean if they're going to be where people are, so foresters should work with the builders of the cities' highways and airports to provide these facilities, yet provide them with forests and trees around. Multiple use necessitates the respect of one user for the uses of another.

There are persons concerned with pollution who emotionally demand perfectly clean air. If we are going to use air for other things, we cannot demand that it be perfectly clean but that only a tolerable amount of foreign substance be in it. Air has never been perfectly clean. Indeed, if it were it would never rain for there would be no nuclei of condensation.

Multiple use presupposes a tolerance of, and a knowledge of, the other fellow's uses.

The Society of American Foresters recognizes that in managing and using forest lands for human benefit, one must relate them to all the other natural resources but, so far, apart from the provision of wood, they have been insufficiently related to the more metaphysical human needs.

Pressures to take valuable timberlands out of competent private management can be resisted if a way is found both to increase wood production and increase the use of the lands for people.

With those who maintain that they'd rather have a redwood than a redwood house, it is hard to argue. They will say that engineers and scientists can invent substitutes for wood for building, and that the one thing that we can never reinvent once we destroy it is the God-given natural environment. Man was first the slave of nature; now with his countless array of new chemicals and his almost unlimited supply of power, he is in a position to dominate nature. He first domesticated other animals. Can he domesticate and tame himself to live in harmony with nature?

People to People

It's an oversimplification to say that if we cut down trees, we must cut down population growth. Foresters have been too timber-oriented. They must become people-oriented. We worry about segregation today, but foresters have not bothered about the segregation of trees from people. It is inevitable that in the future, fewer and fewer of us will be in the business of providing the things that people need. More and more of us will be in the business of providing the services that people need, including the provision
of beauty, quiet, and space in which to remain human. We are, indeed, all in each other’s service. Forest geneticists and pathologists working to grow trees resistant to minor levels of air pollutants, must collaborate closely with the engineers who are trying to reduce the amount of these pollutants. Thus, by approaching the problem from each side, we may reach a sensible standard—the right amount of air pollution for the multiple use of the air, if you like.

In the middle of the Sahara Desert hundreds of miles south of Tessalit and a thousand miles north of the southern limit of the present Sahara, there are rock drawings depicting jungle animals and indicating that the jungle was once there. This desert grew south undoubtedly with the help of man as also in India, at the rate of about a mile a year. Surely, with our present scientific and engineering prowess we can roll the carpet of jungle back.

If we get the foresters out of the forests so that they can see the trees in the cities, and bring to other cities William Penn’s vision of “Greene Countrie Townes,” then foresters would not have to worry if trees could vote and would win the confidence of fellow humans, not as in the old slogan, a chicken in every pot, but with a tree in every plot.

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Timber Quality Evaluation—
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The method of forest management prescribed and used by the operating forester, of course, has a considerable effect on the quality of the timber crops produced. To produce high-quality he must have some measure of quality. Each successive cutting operation during the rotation provides the opportunity to manipulate growing stock quality, as well as volume growth. Here too, the use of an indiscrete quality evaluation system could be most useful in determining potential.

Still another major use for quality evaluation systems is within the forest products industry where the trend is toward large vertically- or horizontally-integrated companies. They are concerned with allocation of logs to alternative plants, aiming at optimum value. Log grading systems are becoming very useful to management for this purpose. Moreover, there is the challenging opportunity of evaluating quality at each stage of the manufacturing process, where the mix of output units can be evaluated more precisely than the input unit in terms of predicting the next stage outputs. Thus, the output of one process is the input to the next and the various steps share strong inter-dependencies.

With the development of better timber quality evaluation systems, for the whole array of uses they can serve, the resource can be better managed and used to meet the growing needs of the market place. The task is large, but necessary if we are to meet the predicted demand for wood in the years ahead.