

The Laws of Ecology

by HARRY POLLARD

THE first law of ecology is that if a thing is profitable, it will be done; if it is not profitable it won't be done. For example, if it is profitable to clear the slums they'll be cleared; if it is not profitable all the laws that can be passed will fail to clean up these environmental disasters.

The next law is simply that we are unlikely ever to run out of food, fuel, or anything else. The problem is not one of world overpopulation; indeed, the whole population of the world could fit handily into the State of Texas. It works out at about six families an acre. As for California we find that there is sufficient room—including residential, commercial, industrial and recreational needs—for the entire projected 1990 population of our state—in the Bay area. No one need go to San Francisco for a cultural weekend, because they'd already live there.

As all the cities, towns and villages of the United States occupy something like one-half of one percent of the space of the United States and in them some eighty percent of the population live, the conclusion one is faced with is that we have an empty America.

The problem with large cities, then, is emptiness, which leads to economic inefficiency and, as in New York, to the incredible triple income tax, federal, state and city—and the exodus from the city into the even emptier suburbs. So the third ecological law might well be an empty city is an inefficient city, and the cause of air pollution is not too many people but too few.

Space for the increasing population is no problem, but how are you going to feed them? This is the second part of the equation: food, clothing and shelter for homo sapiens, the biggest consumer of them all, but also the biggest provider.

Let's put it into perspective. Karl Brandt said it well: "Agriculture is the universal and eternal chemical industry which utilizes solar energy directly to mine carbon by photosynthesis from the air. The gigantic agricultural output of carbohydrates including cellulose, of fats and proteins is derived from the air and water except for a few percent of ash content that happen to come from the soil and can be replaced at any time. This basic fact seems often to be ignored in discussions about the 'resources' which agriculture utilizes."

All you need is air, water and a little ash. Let's examine that contention. Based on dry weight, upwards of 90 percent of plant life consists of carbon, hydrogen, oxygen and nitrogen for the proteins. The ash consists essentially of the potash salts and phosphates, and

known reserves, as of now, will last us for several centuries and we'll probably find some more tomorrow, or next week, or next month.

In the United States our oil will last us another 15 or 20 years if we don't count all kinds of possibilities. In any event we can turn to coal, which might run out in about 4,000 years. Meantime, we can drink the water which, assuming no more rain will fall, will still last us for over 7,000 years.

How about the tricky little things like the magnesium so essential to photosynthesis reactions because it is vital to chlorophyll? Well, cosmically as well as terrestrially it's the eighth most common element. The other important trace elements are equally obtainable and if they ever do run out we'll make them.

All we need to make anything at all is some know-how and some energy. If we really wanted coal we could use energy to make some out of its ashes, but that would be ridiculous. More sensible would be for us to consider the fact that we can't use up our earth. All we can do is to change it around a little.

At the end of each day we have changed the form of some materials and used some energy. And there we have it. What we use up on this old earth of ours is energy. So we should look to our energy sources. Less than two percent of our energy needs is provided by water power, yet the possibilities seem tremendous. The largest hydro-electric plant in the world outside Russia is being constructed in British Columbia near the southern end of the Alaskan highway. It uses some five percent of the potential power in this area alone!

Tidal energy is another possibility. France for example is experimenting on this hardly touched power source. The Bay of St. Michel has a high tide peak of 43 feet. Using the entire bay would provide one third of the energy requirement of East and West Germany.

Nuclear power could supply a good percentage of our needs, and the world supply of uranium, thorium and a few other appropriate materials would last about 2,000 years. But before they ran out might we not be using sand, or garbage, or something else?

What about the serious and widespread use of this enormous energy that arrives each day with the sun? Well try this on for environmental size. Rope off an area of New Mexico desert 65 miles wide and 100 miles long. Cover it with solar mirrors operating at ten percent efficiency—and remember the theoretical efficiency of solar batteries is 22 percent. Assume we've just managed a ten percent efficiency. This area of desert would supply the entire power requirements for the whole of the United States. We could close down every other power station in the country.

The final law of ecology is that man, too, is part of our ecology and a unique part. For man has reasoning ability which gives him freedom of choice. He is not *required* to do things, as are the other inhabitants of this planet. His ability to adapt himself or his environment is the reason why he has survived and multiplied to cover the earth until now, there is no place unexplored except the deepest oceanic trenches, and they too are yielding to man's advance.

The good things of life we can afford only when the basics have been economically produced—so our first ecological step is to find how most efficiently we can act.

Perhaps a necessary prelude to removing ecological threats is to remove the ecologists. At least that would force us to use our best means of ecological defense—common sense.

A portion of an address before the First Unitarian Society of Sacramento.

Chaos of Fallacies

THE ERROR of treating land as personal property has destroyed the peace of the world and brought on violence, poverty and the suppression of liberty. The application of land value taxation would be an important first step in establishing individual freedom and opportunity.

The farm situation is typical of the loss of initiative. The expressed aim of the government was to help the family farmer, to limit production, and to sustain prices. But while production was cut off in the best farm land, we paid for huge dams and irrigation projects to create agricultural lands out of deserts, thus increasing our taxes and enriching large landowners. The net result has been to make the rich richer and the poor poorer.

In our country where we supposedly oppose communism, we still accept its premise that capital exploits labor, so we have built up a powerful labor monopoly which can exploit the rest of us by constantly raising wages and prices, making it necessary for the government either to accept increasing unemployment or to inflate our money supply. This, too, is perpetual coercion—not liberty.

We are lost in a chaos of fallacies that pass as facts. This insanity is contagious and it has permeated our schools and churches. The apathetic approach in the classroom seems to be to discuss all shades of opinion with great tolerance and arrive at no conclusions. The accumulated knowledge of the past and the lessons of history get short shrift.

What we need most is to recover our traditional philosophy of freedom with honor.

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