The American Assembly, *Columbia University*

THE GOOD EARTH OF AMERICA

PLANNING OUR LAND USE

Prentice-Hall, Inc., *Englewood Cliffs, New Jersey*

A SPECTRUM BOOK

Library of Congress Cataloging in Publication Data
MAIN ENTRY UNDER TITLE:

The Good earth of America.

(A Spectrum Book)
At head of title: The American Assembly, Columbia University.
Papers, prepared as background material for the Arden House Assembly on Land Use.
Includes bibliographical references.
1. Land—United States—Addresses, essays, lectures. I. Harriss, Clement Lowell, ed. II. American Assembly.
HD205 1974.G65 333.7'0973 74-12007
ISBN 0-13-360347-4
ISBN 0-13-360339-3(pbk.)

10 9 8 7 6 5 4 3 2 1

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Carl H. Madden

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Land as a National Resource

How will we use our land in the future? One thing is clear. We can no longer live with the land-use policies of the past. The predominant policy has been one of unfettered economic growth—the development philosophy. At one time this philosophy served a useful purpose. It enabled almost everyone to live better.

But the development philosophy was flawed in two ways. Most advocates treated land as if it were indestructible. Secondly, they treated land merely as a commodity, ignoring its biological role as a crucial link in the web of life on earth.

More than a century ago, de Tocqueville saw our "boundless continent" as the basic source of strength for the new republic. Since then, the U. S. people have generally treated land as a commodity of limitless supply for private exploitation. Land could be divided and subdivided. Parcels could be owned by individuals who could use the land they owned in whatever ways they saw fit or sell it in the marketplace. Economic science explained this behavior with its theories of exchange, capital, and distribution.

But land is not indestructible. Treating land as merely a commodity rather than also as a natural and a community resource often led to its despoliation. Of course, the despoliation of the land and deterioration of the quality of life in the cities did not go unnoticed. Juxtaposed against the development thrust was the late 19th and early 20th century conservation movement, begun about when the frontier ended. And the conservation movement has been gaining strength as the development thrust has

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CARL H. MADDEN, *chief economist for the U. S. Chamber of Commerce, has been economist for the Senate Banking and Currency Committee and consultant to the Treasury Department. In 1963 he was Dean of the College of Business Administration, Lehigh University. Dr. Madden has written several textbooks in economics and many economic studies.*

subsided. Added to the conservation movement in recent years is the new science of ecology, whose vantage point shows "the connectedness of things" in nature to be subtle, complex, and often not obvious to intuition.

We are forced by the widening of human perception through the power of new knowledge to rethink how we will use our land in the future. We can no longer rely solely on economic science for guidance since rigid adherence to the cause-effect, single-variable principles of the firm has burdened us with our present circumstances. How did that happen and where do we go from here?

America's Land and Its Uses

First, a word about the land itself. In 1970 the average person in the U. S. had the products and use of about eleven acres of land—some in western desert, some in Arctic tundra or barren mountaintops, but some in fertile cropland, magnificent forest, or the valuable land of our towns and cities. Land remains a great resource. Our total land surface per person is almost exactly the world average, but our land is vastly more productive than that of the world as a whole.

The "big three" of land use, in terms of acres, are grazing, forestry, and cropland, with 34, 32, and 23 percent respectively of the total area of the 48 contiguous states. Two other important uses of land—urban and recreation use—together account for 4 percent of the total area, but these uses directly affect far more people than the others. The five uses together comprise 93 percent of the total land area; the other 7 percent is used for water management and storage, transportation, mining, defense, or is idle land.

Land use will be affected in the future, as it has been in the past, by demographic, economic, and technical trends. From 205 million people in 1970, the U. S. may grow by an estimated 60 million to somewhat fewer than 300 million people by 2000, the exact size depending on whether the birth rate remains low. Land area remains about constant while population grows, since the fertility rate would have to stay at the zero population growth level of 2.1 children per family for 75 years before population growth would stop. By 1970, 73 percent of the U. S. population was urban, living on about 2 percent of the land area. The value as a whole of this 2 percent was approximately 50 percent greater than the value of all the other 98 percent.

In recent decades, the U. S. population has become more urbanized, more suburbanized, more metropolitanized, and more coastalized. That is, people are moving to towns and cities from rural areas. Within urbanized areas, people have been moving to suburbs. Thus, metropolitan populations grow faster than central city totals, and some very large cities have gotten smaller while their metropolitan area population has grown.

Finally, people have been moving out of the Midwest and rural areas to locations near the coasts. By 1970, half the population lived no more than 50 miles from a coast, including the Great Lakes coasts.

Economic and technical trends have both "shrunk" and "expanded" the size of the country. As man has developed a highly productive economy, communications and transportation have markedly shrunk the effective space of the U. S., in terms of allowing travel and freight shipments over long distances, and expanded it in the sense of opening up new areas for use of people living in various places. Moreover while the fraction of the total population living in metropolitan areas has grown very rapidly—and in this sense people are "crowded together in urban regions"—still, the average amount of land per person in urban regions has grown throughout the twentieth century.

The economic and social size of the nation, measured by the time distance across it, has shrunk. To illustrate, the shrinkage is as much as from a map the size of a moderately large dining room table (pre-railroad), to a map the width of four quarter coins (rail distance, 1912), to a map the width of one quarter (air distance, 1931), to a map half the width of a dime (piston air distance, 1950), and finally to a map the width of a kitchen match head (jet air distance today).

The highly productive economy, the urbanization of the population, and the shrinking of social and economic space have all led to growing concern over the quality of our environment. By and large, little attention has been given to the impact of the production process on the natural environment. But with the advent of nuclear power, the prospect of nuclear fusion, the increasing scale of many types of technology, the rapid growth in energy use and the use of chemical fertilizer, our past concentration on production for the consumer seems to more and more people to be misguided and incomplete. Of course, the matter of the environment goes far beyond land use. And it is far from clear that people are willing to pay for environmental costs. Still, it is becoming evident that past land-use policies will change.

Most of our land is, and will remain, privately owned. About one-third of our total land area, however, is publicly owned, largely by the federal government. Since Jefferson bought Louisiana from France for $15 million in 1803, the U. S. has expanded its territory immensely. We bought Florida from Spain in 1819; we annexed the independent Republic of Texas (after its war with Mexico) in 1845. We settled with Great Britain the boundary dispute over the Pacific Northwest in 1846. Then, after our own war with Mexico in 1848, we annexed the Pacific Southwest, including California, and later bought (in the Gadsden Purchase) from Mexico a large piece of southern Arizona. We bought Alaska in 1867 from Russia and annexed Hawaii in 1898.

Most of this land became the property of the U. S. government. For

100 years after the U. S. gained its independence, the dominant political philosophy was to dispose of the land to settlers. The Homestead Act of 1862 gave a settler (excluding blacks) up to 160 acres of land in turn for his residing on it for five years, making some improvements, and the payment of very modest fees. Other acts of Congress were equally or more generous. Sizable land areas were granted to states for public purposes such as to set up schools, to construct railroads, and to build canals and highways. The process of land disposal meant opportunity for Americans and dominated early American history. Heedless and headlong, it was a major social and political force throughout the nineteenth century, and it moved two-thirds of the land in the 48 coterminous states out of the public domain, mostly into private ownership. Land was the capital given to ordinary people by government.

Although most land will remain privately owned, government now has extensive powers over the use of private land. One is the power of eminent domain, to take private land needed for public purposes. Another is taxation (one of the largest costs of land ownership). A third is the police power (to impose zoning ordinances, to protect owners against nuisances, to set up subdivision rules). And, finally, there is the power of the public purse: to subsidize the building of highways and airports, power plants and power lines (especially in rural areas); or to help finance forest fire control, soil conservation, reduction of crop acreage, or other programs through payments to farmers.

Origins of the Commodity Concept of Land

In the process of rethinking land-use policy, it is important to look back at the origins of the concept of land ownership. A thousand years of Anglo-American history record the gradual accumulation of individual rights in land, encompassed in what is called "fee simple." Centuries of political struggle were required to get to the point where a holder in fee simple could theoretically do anything whatever with his possession.

The Anglo-American title system is descended from William the Conqueror who introduced continental feudalism to Saxon England in 1066. In concept, all land belonged to the sovereign; and he was in no way beholden to anyone else for his rights. He enfeoffed large tracts to major barons in return for promises of military service. The great barons, known as tenants-in-chief, sub-enfeoffed land to lesser barons and so on down the feudal chain to the knight's fee which was in theory enough land to support the knight and his horse. The practice never quite coincided with the concept.

Over many centuries, the whole system disintegrated as the individual rights of individual holders progressively encroached on the rights of the crown and of the great barons. Magna Carta was a step along the way.

Eventually, most of the land in Britain and virtually all of it in the United States was converted to "fee simple" title or some variant of it. Fee simple is often described as a "bundle of rights." As time went on the bundle got bigger until about the end of the nineteenth century when it crested.

But the issues in the struggle were political and economic. Until well into the nineteenth century, the word *scientist* did not exist; what we call scientists were known as "natural philosophers," and they comprised a small group, mostly amateurs and a few professors. Only around the turn of this century, with the rise of conservationists, were scientific arguments of biology and chemistry brought to bear on land-use policy. To the extent that earlier, the Crown embodied the concept of the general welfare in the feudal structure, modern society by paying note to natural and social science is marching back toward where it was once before. But to the extent that the general welfare is a concept never identified with the actual person of a monarch, the new direction can be a giant step forward.

Should land be property? In the seventeenth century, John Locke argued that it should:

> The great and chief end, therefore, of Men's uniting into Commonwealths, and putting themselves under government, is the Preservation of their Property. As much land as a man tills, plants, improves, cultivates, and can use the product of, so much is his property. He by his labour does, as it were, enclose it from the Common.

God commanded man to labor the earth and so entitled him to appropriate whatever land he mixed with his labor, and "there was still enough and as good [land] left, for others."

In parts of the world where land was already parceled out, Locke justified unlimited ownership of land on esoteric grounds as well as because it "quickened" and increased trade. Fundamentally, he argued that man had a natural right to own property. Indeed, "life, liberty, and property" almost got into the Declaration of Independence in 1776; Jefferson substituted "pursuit of happiness" only, as it were, at the last moment.

Whatever the arguments, the fact was that in the western world of the seventeenth century, individuals called land their own. It was a commodity to be exchanged in the marketplace. But what was its value? And how much of the national income should accrue to the landlord class? These questions preoccupied western economists of the eighteenth and nineteenth centuries.

LAND IN CLASSICAL ECONOMICS

One aspect of their concept of land is directly pertinent to the problem we face here today. Both the Physiocratic philosophers and the economists who developed classical economics saw land as a source of surplus value

over and above costs of production. All the emphasis was on the extent and the bounty of the land. No thought was given to the possibility of depletion or destruction of its value. No thought was given to the role of land in the life cycle because nothing was known of the later scientific discovery of the interrelatedness of all life in its terrestrial environment.

From the development of better plows in the Middle Ages, allowing farmers to plow up extensive grass lands, farming technology improved. Man saw himself for the first time as the master of nature. The theme emerged that man could shape nature to his own ends through science. But nature was viewed as a machine in the mechanistic view of scientists and mathematicians such as Descartes, Galileo, and Newton. In the eighteenth century, the Physiocrat Robert Turgot said, ". . . It is the earth which is always the first and only source of all wealth; it is that which as the result of cultivation produces all the revenue." All surplus value came from the land.

In Chapter II of his *Principles,* David Ricardo referred four times in the first two pages to the "original and indestructible" powers of the soil and once to the "inexhaustible" quantities of air and water. Thomas Malthus too referred to rent as a surplus that we owed to "the bounty of nature." And Alfred Marshall said,

> We may call to mind that the land has an inherent income of heat and light and air and rain, which man cannot greatly affect and advantages of situation, many of which are wholly beyond his control. . . . These are the chief of its properties, the supply of which is not dependent on human effort.

Clearly, the possibility of massive air and water contamination or interruption of nature's life cycle was the furthest thing from their minds. Quite the opposite—Marshall went on to argue that the properties of the soil can be greatly improved by man's effort. All the emphasis was on land's bounty and accretion to its value. Classical economics was thoroughly imbued with the mechanistic view of the mathematicians and physicists of the eighteenth century. Indeed, up to today, economic theory remains largely mechanistic. It pays little attention to the depletion of resources or to the uses the consumer actually makes of the products and services produced. Everything that reaches the consumer shows up again in some form as a residual and eventuates in waste. However, economic theory is able to deal with the problem of waste only episodically; the problem is not integrated into economic theory as a major consideration.

The English economists' view of land's valuation and the distribution of its product was useful for their time. Marshall argued that the theoretical division between rent and the tenant's share made capital funds available and spurred development. But we must keep in mind that all their concern was focused on rural lands and land's agricultural possibilities.

In Marshall's time, the notion of land as a source of surplus value was abandoned in economic thought and land came to be viewed as simply another factor of production used in a complementary fashion with labor and capital to produce goods of value to consumers. Land took on a real, market value because of its combination with the other factors of production, and the focus shifted to its marginal productivity in combination with other factors. This marginal productivity gave it a capital value and clarified the intellectual perception of any given piece of land as real, private property. A German economist and landowner, J. H. V. von Thunen, began to develop the latter view of the valuation of a piece of real property as early as 1830. Others, working independently, later added to the theory of land valuation in neoclassical economics.

Not only was it necessary to relate the value of land to the product derived from it as the neoclassical economists did; it was also necessary to recognize that the product of land was a flow of goods and services and to factor that into the value equation. The result was the modern basis for many of the ideas in business finance.

For this dimension we may thank Messrs. Eugene von Bohm Bawerk and the American economist Irving Fisher, who first developed the theory of interest—although they did not fully agree upon why interest arose as a return to capital. On one thing they did agree: present goods are valued more highly than future goods, and the rate at which the value of future goods is discounted to transform it into present value is the rate of interest. The greater the rate of interest the lower the present value of the future amount at any given point in time. For example, at an interest rate of 10 percent, $10,000 payable thirty years from today is worth only $570 today while at a 5 percent rate of interest it is worth $2,310.

This view also implies a time horizon beyond which the present value of a future amount is negligible. For example, at a 10 percent rate of interest $10,000 payable five years from today is worth $6,210 today; $10,000 payable fifty years from today is worth only $850 today; and $10,000 payable 100 years from today is worth practically nothing. That means there is a finite time horizon on investment under the commodity concept of land.

The location of this time horizon is not a happenstance. It could be drawn closer by raising the interest rate. It goes to the heart of the valuation of capital, including land, and is determined by the conditions of supply and demand. On the supply side there is the time preference of savers who are the source of investment funds. On the demand side is the productivity of land and capital. The time preference of savers for present over future consumption has to be overcome by the interest rate that investors are prepared to offer them.

These ideas are the roots of contemporary business finance theory. This view is the basis upon which investments are made today. There is no

meaningful distinction here between capital and land. Although this conclusion has been the source of great controversy even before the time of Alfred Marshall, land is seen as different from capital only in that it is a "free gift of nature" whereas capital is the result of man's efforts to produce. Yet land is allocated—its use is determined—by this microeconomic theory of investment. Many conservation investments would not begin to pay off in economic benefits for decades. Under the commodity concept of land, when such conservation investments would have to compete with other investment opportunities that would pay off sooner, they simply would not be undertaken. One has to go outside the economic paradigm to make certain conservation investments. One has to view land as a resource instead of as a commodity.

LAND AS CAPITAL IN THE UNITED STATES

The commodity view of land was an engine of economic growth, and growth has served us well. However, it has not been an unmixed blessing. When America was first colonized in the early seventeenth century land was abundant. Economic and social pressures emanating from the abundance of land in the New World quickened colonization and dictated land-use policies for two or more centuries.

For example, large areas of land were originally granted to aristocratic European families in Maryland, Pennsylvania, the Carolinas, New Jersey, Maine, and New Hampshire. William Penn held 47 million acres. Some of these families (not Penn) attempted to re-establish feudalism on their landed estates; but it did not work, because of the very abundance of land which made the effort possible in the first place. Immigrants would not work for a big landlord when they could easily acquire cheap and fertile land of their own.

And immigrants, too, were abundant. They were attracted by the prospect of available land. Land had a special status-giving characteristic for Europeans of those times, because it was the major form of wealth and independence. And the growing scarcity of land in England generated a flow of land-hungry peasants who had recently been displaced from their own lands by the enclosure movement. The enclosure movement itself probably resulted in great part because of the growing market economy and the effect of new markets for the produce of the land on the value of the land.

The British scholar C. K. Meek has told us how in "primitive" parts of Africa, land originally had no value or a vaguely conceived communal value. The land took on some characteristics of property when an individual cultivated a piece of it and it became "his" land in the eyes of his neighbors. At least it was his land for the time that he kept it tilled and cleared, after which—in an early escheat policy—it reverted to tribal ownership or simply lay fallow awaiting the next proprietor. But, as markets

for the produce developed in Africa, cleared plots took on a greater economic worth. Boundaries became more important and better defined.

Is it not likely that ever since the origins of history this pattern of events has created the institution of landed property in most western societies? It is reasonable to think so. In this regard individualistic microeconomics serves us well in interpreting the institutions of the past. Private property takes on scarcity value like anything else: the greater the value, the better the boundaries must be defined.

The abundance of American land in the era of colonization determined the uses of land. Fertile land seemed unlimited in supply. The entirety of the continent east of the Mississippi was forested. Elementary economic production theory dictates that in an economically efficient production process the relatively abundant land should be used extensively—and it was used extensively (albeit without benefit of Marshallian production theory which was fully developed years afterward). Cotton and tobacco exhausted the lands of the South, but there was always the prospect of more land further west. Exploiting the soil was common and under the circumstances, good economics for the landowner. When erosion and exhaustion of nutrients despoiled the land, there was no attempt to restore fertility. It was cheaper to clear a new and more fertile area.

The view that land was like any other form of private capital shaped most land-use policy in the United States up through the middle of the twentieth century. Homesteading has been one of our most durable land-use policies. Much of the original colonial lands were distributed to ordinary people. In 1664 New Jersey began giving 150 acres of land to each freeman who could find transportation to the colony. The Dutch West India Company followed the same practice in New York. Similarly, the Virginia Company distributed its Middle Atlantic lands by headrights for each member of an immigrant's family. In many of the colonies the land was sold off in small holdings by the original companies. But the effect on land tenure was the same, and the pattern was set. Individual ownership and use of land was the rule. And exploitation of the land was the rule as well since land was so abundant in those times.

The perception of rural land as a nearly free good in comparison with the value of other factors of production persisted into the nineteenth century. Under the authority of the 1862 Homestead Act, the 160 acres of western land given to many bona fide settlers was seen as assuring opportunity in an almost empty subcontinent. Under the terms of the Timber Culture Act, 160 acres were given to anyone promising to plant 10 acres in timber. Western grazing lands were sold off at 25 cents per acre under the 1877 Desert Land Act. Under the 1878 Timber and Stone Act, lands valuable only for timber and stone were sold in units of up to 160 acres for $2.50 per acre.

Then there was mining. Under the Mining Act of 1872 any individual

could stake a claim on federal lands which he could then use or sell as he chose. In *The Quiet Crisis,* Stewart Udall tells us of the effect of mining on the value of land. In 1852, Anthony Chabot, a California goldminer, devised a canvas hose and nozzle that would wash banks of gold-bearing gravel into placer pits for processing. The end result was massive movement of soil into the rivers draining the Sierra Nevada. Communities were inundated with muck; valley farms were covered with gravel. Strip mining too was carried forward under the presumption that land was abundant and therefore cheap. But as we know now—land is not indestructible, and it is scarce and valuable.

THE INDIAN CONCEPT OF LAND

The early American view of land use was in direct opposition to the American Indians' concept of land and how it should be treated. The Indian was close to the land but not in the sense that one is tied by property rights. The Indian's attachment was a deep, emotional tie. He intuitively saw himself and the land as integral parts of a larger whole. Contrary to the large scale raising of cash crops by itinerant farmers who moved from farm to farm seeking more fertile soil, the Indians were often rooted to their land and had an early appreciation for the sources of plant nutrients to restore the productive powers of the soil.

When approached to negotiate for the transfer of their lands to the state, the Indians were dumbfounded. In the words of Chief Sealth of the Duwamish Tribe in the state of Washington, as he wrote to President Pierce in 1855:

> How can you buy or sell the sky—the warmth of the land? The idea is strange to us. Yet we do not own the freshness of the air or the sparkle of the water. How can you buy them from us? We will decide in our time. Every part of this earth is sacred to my people. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. . . . The air is precious to the redman. For all things share the same breath—the beasts, the trees, the man. . . .

Yet the Indians were forced to negotiate and accept the Anglo-American concept of land use. For example, the Cherokee Nation once spanned areas of North and South Carolina, Georgia, Alabama, and Tennessee. As settlers moved in, some Cherokees moved on to Arkansas to find escape. But most did not move. The Eastern Cherokees agreed to cede their lands to the United States and emigrate to an Oklahoma reservation in return for $5 million. Some were hesitant. In the euphemistic words of a 1924 law treatise, "The Western Cherokee manifested great reluctance to emigrate and it became necessary to send troops into their country to secure their removal."

In 1838 the reserved lands were ceded to the Indians ". . . to have and

to hold the same, together with all the rights, privileges and appropriations thereto belonging to the Cherokee Nation forever." Later, for some Indians, the transition to the property concept was completed when their Oklahoma lands were allotted among the residents and ownership was vested in the individual. Others, like the Navahos, have clung to their concept of communal ownership, and land-use policy is determined in tribal councils. The Navaho's view has always been that natural resources are common property—the coal in the ground, the timber of the mountains. In the eyes of some observers the Indians had a land ethic. We had none. But then came the conservation movement.

FIRST CHALLENGES TO THE COMMODITY CONCEPT

Early challenges to the commodity concept of land came mainly from two schools of thought. There were the first American conservationists with Gifford Pinchot, Theodore Roosevelt, and Major John Wesley Powell outstanding among them. And then—looking at the urban problem—there was Henry George.

George elevated the perception of land from that of a mere factor of production to the central resource of the universe. "On the land," he said, "we are born, from it we live, to it we return again, children of the soil as truly as is the blade of grass or the flower of the field. Take away from man all that belongs to land, and he is but a disembodied spirit."

Land is a free gift of nature, George said, and releases her wealth by man's labor. Individual property in land denies to labor its own product.

Landowners had a right neither to the land itself, he said, nor to the value which social integration adds to the land, nor to the improvements which are inseparable from the land. The user of land was to be entitled to the product of his capital and labor on the land but not to the rent. That was to be taxed away. The value of the land derived from the community and should be returned to the community. In this way, Henry George made a big contribution to ideas about land taxation. He pointed out the sense in which land value derives from two sources: (1) location value, and (2) the value of improvements.

A tax on the location value of land would not destroy incentive as George saw it, but would stimulate production by bringing land held for speculation into use. Population would be dispersed from areas of high density to those where it was sparse. Redistribution of this social income would reduce inequality at the same time that the land tax increased economic growth.

Along with Henry George's effort to express a new view of land as a community resource, there was a growing concern with the lack of planning in urban land use. Men of vision recognized that the overcrowding, ugliness, and disorder of the city could be ameliorated by a proper concern for conservation. Frederick Law Olmsted conceived of a central park

in the heart of Manhattan. Unlike the economic man who weighed costs against revenues in the calculus of private investment, Olmsted was a visionary who valued the potential benefits that future generations would inherit. In the mid-nineteenth century he conceived of public gardens, open spaces, and playgrounds to improve the quality of city life. But in city after city the economic imperative overcame the emergence of an urban land ethic.

The urban crisis—mainly a problem of class, race, unemployment, poverty, education, and crime—is also a problem of land use. Our lack of appropriate land-use policies is in part responsible for the present state of affairs. We have brought both suburban sprawl and inner city blight upon ourselves by our lack of vision and our absolutist views of ownership and use of the land.

Edward Banfield argues that both urban sprawl and inner city blight are not new phenomena, and both have resulted from mainly economic factors. In the days of horse drawn carriages people settled close to the source of their livelihood. Local economic growth both drove them from their homes and gave them the means to move. Growth made the commercial value of the downtown properties too high to support residences, and many of the activities in manufacturing and trade made the downtown locations undesirable as residential areas. As the well-off moved away from the changing city, the abandoned neighborhoods were replenished with wave after wave of immigrants. The electric commuter train in 1870, and later the automobile, facilitated the movement of the well-off away from the noise, dirt, and disorder of the city. By 1915 two and one-half million automobiles were in use. The pattern was set. Highways were built to enable commuters to travel from their semirural homes on larger lots than the city had ever afforded them. Manufacturers too sought acreage on which the lower rents would enable them to build more efficient single-level factories.

In this way have the spread suburb and the inner city blight unfolded. Both were caused mainly by the absolutist commodity concept of land. But not everyone has viewed the pattern of urban growth and the commodity concept of land from the benign perspective that Banfield has taken.

While George and Olmsted were mainly concerned with the urban problem of the day, others were preoccupied with even broader visions of conservation. George Perkins Marsh was one of the first to challenge what Stewart Udall has called the American myth of superabundance. In 1864, Marsh argued that the qualities of the land are not indestructible. One of the first to be concerned with the balance of nature, he argued that every part of the animal community had its particular plan in the web of life. He believed that all of man's large-scale engineering projects on the land resulted in unforeseen harm and said, "We are never justified

in assuming a force to be insignificant because its measure is unknown, or even because no physical effect can now be traced to it." To disturb the balance of nature without considering all of the consequences was potentially disastrous. Clearly, his arguments carried little weight with early private developers. But they did arouse a response in other conservationists. In 1878 Major John Wesley Powell of the Interior Department laid out a land-use plan for the western United States. In it he called for public irrigation of the western lands with water rights accompanying property rights in irrigable lands. He drew up plans to optimize grazing on the arid soils. However, in Udall's words, "His report used bear language in a bull market, and most of the Western leaders would have none of it."

Other early conservationists were more successful. Gifford Pinchot pioneered in forest management and established the U. S. Forest Service under Theodore Roosevelt. He argued that government planning was necessary to save the forestlands of the west. As in early strip mining, any timber company that stopped to reforest and prevent erosion in the highly competitive logging industry courted bankruptcy. Pinchot argued that the idea of reserving forest lands to remain as untouched wilderness was irrational—in part because western timber men would never tolerate such a policy. Instead he proposed a system of forest management whereby the forests could be used and yet conserved through a rational plan for self-renewal.

From 1871 through 1906 a Commissioner of Fish and Fisheries was created, Yellowstone National Park was established, forestlands were set aside, national wildlife refuges were created, and the work of the Forest Service begun. This conservation movement finally subsided with the coming of World War I, but it re-emerged in the thirties, when dust storms and floods battered impoverished farmers.

In that decade the Soil Conservation Service was formed, the Taylor Grazing Act was passed, and large river valley development projects were launched. Among these was the Tennessee Valley Authority—a land-use planning effort of vast proportions. Soon, however, the conservation movement subsided because of World War II and its preoccupations. Yet it was to surface again in the 1960s with a firmer intellectual foundation, broader public support, and new codewords.

Ecology

Long before economic philosophers were constructing mechanistic models from the borrowed premises of Locke's and Newton's natural law and Bentham's individualistic utilitarianism, practical men were learning about conservation. Deforestation was viewed as a social problem in Europe as early as the thirteenth century. In the late eighteenth century Europeans saw the connection between deforestation and falling supplies

of groundwater. The land shortage in the Netherlands started a land reclamation program in the 1800s. Lime and manure for fertilizer were in common use in land-short Europe.

Not everyone believed in the arid and abstract microeconomic notion that nature was only a huge machine and that man could master nature's forces without unforeseen consequences. Visionaries like George Perkins Marsh intuitively understood the systematic characteristic of our living environment. By 1864 Marsh explained the basic ecological concept. Every part of the plant and animal community, from microscopic organisms to earthworms to buds to trees to mammals has its place in the web of life. To destroy any part of the web is to threaten the entire community. Marsh foresaw that draining lakes and marshes and altering rivers by such devices as "channelization" could have unforeseen side effects on water tables, wildlife habitats, vegetative cycles, and the micro-climates.

In *Man and Nature* Marsh said:

> The ravages committed by man subvert the relations and destroy the balance which nature had established . . . ; and she avenges herself upon the intruder by letting loose her destructive energies. . . . When the forest is gone, the great reservoir of moisture stored up in its vegetable mould is evaporated. . . . The well-wooded and humid hills are turned to ridges of dry rock . . . and . . . the whole earth, unless rescued by human art from the physical degradation to which it tends, becomes an assemblage of bald mountains, of barren, turfless hills, and of swampy and malarious plains.

Today the role of land in nature's life cycle is much better understood, but the insights of people like Marsh have been verified. In describing the role of land in the balance of nature Aldo Leopold refers to the "land pyramid" of energy absorption.

Plants absorb energy from the sun. This energy flows up through a pyramid-like circuit called the biota. The bottom layer in the pyramid is the soil; upon this is a plant layer, then an insect layer; another cross section includes rodents and birds; and so on up to the larger carnivores. As we proceed up the pyramid each successive layer of life is less abundant. One plane of interdependence is the food chain. Each species is a link in many dimensions such as soil-corn-cow-farmer. The pyramid is a vast system of similar chains, all interdependent. Food chains conduct energy from the soil up the pyramid. Death and decay return it to the soil.

When a change occurs in one part of this system of circuits, the other parts must adjust. Man imposes rapid and large-scale shocks to which the systems cannot adjust.

In sketching the role of land in the balance of nature, Leopold wished to emphasize three things: (1) Land is not merely soil; (2) native or local plants and animals keep the energy circuit open; others might not; and (3) manmade changes are of a different order than evolutionary changes,

and have effects more comprehensive than is intended or foreseen.

Can the alterations we want in the life cycle be accomplished with less violence? Can the systems adapt? In the past some regions have and some have not. In the future, Leopold argues, intelligently planned land-use policies must take these physical relationships into account. But the problem is compounded by the fact that we have only just begun to understand the infinite complexities of the life cycle and land's role in it. The most minute particles in the soil can be critical to its successful maintenance.

Does not this new knowledge of the critical role of land in the balance of nature call into question the concept of land as a mere commodity? Can the market system respond without change to the needs of nature's life cycle? Economic science and real estate law evolved and developed without benefit of this new knowledge. Does this mean that the conclusions of conventional microeconomics and law will lead to perverse results in land use? And can we adapt the calculation of benefits and costs in market transactions to the new knowledge of ecology?

ACTION AND ACTIVISTS

What effect is the new knowledge of land as a resource having on land use? The renewed appreciation for the aesthetic and spiritual value of land has spurred the development of new concepts in land use; proponents have already brought some of them to fruition in the form of improved urban zoning, greenbelts, greenways, and new ways of developing suburban residential properties.

Twenty-eight percent of England and Wales has been set aside for greenbelts and country parks. This action has resulted from passage of the Town and Country Planning Act of 1947, which introduced noncompensable land-use regulations as the main method of guiding urban growth. A 1944 plan established a contiguous greenbelt around London in which private development has been limited. Many of these open-space areas in Great Britain are open to the public although privately owned. Public access is obtained through a consideration paid by the state to the owners.

Similar greenspaces have already been set aside in the United States. A shining example is the Willamette River Greenway in Oregon. The existence of a floodplain turned out to be a fortuitous circumstance for preserving much of the region contiguous to the river in a nearly wilderness state.

In 1966, Karl Onthank, Dean of Students at the University of Oregon, proposed that the areas contiguous to the Willamette in the 120-mile section between Eugene and Portland be set aside as a greenspace. Governor McCall set up a task force to study the proposal, and a comprehensive land-use plan was presented to the legislature.

This project points up the kind of conflict that the new concept of land

as a resource must eventually resolve. The first Willamette plan was to acquire private lands along the banks of the river without resorting to eminent domain. But many farmers refused to sell. They had legitimate concerns about access to irrigation waters and about how the public might litter and vandalize their property. Provision for these concerns was eventually made, but it meant redefining the farmer's property rights as the farmers originally understood them. It also pointed up the need for clarification and specification of the scope, boundaries, and characteristics of the greenway plan.

ENVIRONMENTAL ABSOLUTISTS

There are absolutists on either side of the issue, of course. Juxtaposition of extreme views gives us an insight into the attitudes of the absolutist environmentalists—the cutting edge of change in land-use policy. We have already seen how the philosophy of unlimited land development often produced undesirable side effects of erosion, ugliness, and barrenness. Most people viewed these developments with indolent disregard. Others were incensed and driven to action. Among the latter was John Muir.

Muir was enraptured by the wilderness, and he perceived it with a scope and profundity that transcended the intellectual plane of cognition. Udall reports that Muir sought as many contacts with the wilderness as one man could absorb.

> To him, the true wilderness experience was far more than mere exposure to nature; it began with heightened sensibilities and ended in exactness of observation. He felt the same reverence for the land—the sense of wholeness and oneness—that had been experienced by the Indians and the early naturalists.

He became convinced that it was essential to permanently preserve large tracts of choice lands untouched in their wilderness state.

When Muir came to Yosemite Valley, the sheep and sawmills were already there. There had to be a direct confrontation. Notions of a welfare economics *quid pro quo* beneficial to both sides were out of the question. To Muir, the money-changers had to be driven from the temple:

> . . . Through all the wonderful, eventful centuries since Christ's time—and long before that—God has cared for these trees, saved them from drought, disease, avalanches, and a thousand straining, leveling tempests and floods; but he cannot save them from fools—only Uncle Sam can do that.

This driven man was instrumental in setting aside Yosemite National Park and in founding the Sierra Club.

His perspective is critically important in understanding the evaluation of land-use policy; it can best be summed up by quoting his comment on the damming of California's Hetch Hetchy Valley.

> These temple destroyers, devotees of ravaging commercialism, seem to have a perfect contempt for Nature, and, instead of lifting their eyes to the God of the Mountains, lift them to the Almighty dollar.
>
> Dam Hetch Hetchy! As well dam for waterlands the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man.

The perspective of history thus shows that the roots of today's ecology movement stretch back at least a century. Even the language of the early conservation and environment movement is antithetical to that of the developer. In real estate parlance, there is "raw land" to be bought, inventoried, and "manufactured" into "improved" land. Then, the land is marketed with promises of prosperity and happiness: "Your opportunity to purchase five magnificent acres of America's dwindling real estate."

To be sure, developers are only responding to what the market wants and can buy. In California, between 50,000 and 100,000 acres of rural land were subdivided annually in the late sixties and early seventies by recreational lot sellers. It is absurd and unfair to blame developers for supplying what the market demands. Indeed, innovative developers lead the way in showing how environmental balance can be built into the pricing structure. The issue of rethinking land-use policy, far from a vendetta against development, is a search for improved development with a survival value, a search for balance between growth and environment.

THE NEW CONSERVATIONISTS

What are the origins and sources of the effectiveness of the new ecologists? Accompanying the new tools of analysis in the life sciences that have had such a significant effect on the development vs. conservation issue of the sixties, are innovations in political action methods and in public relations. Environmental groups, in effect, have learned how to get public attention and to lobby using methods long familiar to advertisers and to business legislative organizations, working "within the system."

For example, in the early sixties a proposed dam at Bridge Canyon on the Colorado River would have backed up a reservoir 18 miles into Grand Canyon National Park. In early 1964, the Izaak Walton League, at its conference of more than a thousand conservationists, developed a political coalition, a general strategy of action, and a public education campaign. With the help of a hired professional advertising agency, the group placed a full-page advertisement in the New York *Times*. The National Parks Association produced an engineering study to show that Bridge Canyon Dam was not economically feasible and was not needed. By 1965, plans for the dam fell through.

By 1969, the Citizen's Crusade for Clean Water organized 38 environmental groups to press Congress to increase spending for building waste treatment facilities. They too were successful. By 1970, environmentalists

were able to generate a nationwide organization, mainly of college students. Students and faculty not only responded with enthusiasm to environmental teach-ins, but through the nationwide attention created by Earth Day began a series of changes, still continuing, in business executive action and in political sensitivity to environmental issues. Meanwhile, the subsequent development of the technique of legal intervention through bringing suits under existing statutory or case law has made environmentalists a powerful force in land-use decision-making.

In the 1970s the waning of enthusiastic, general, and popular support for smokestack prosperity—for the one-dimensional pursuit of a quantitatively rising standard of living—can be seen in the emerging sentiment for slowing population and/or economic growth in particular localities. Examples are given in the 1973 report, "The Uses of Land," by the Rockefeller Brothers Fund.

Coloradoans voted overwhelmingly to bar the use of state and Denver city funds for the 1976 Winter Olympics. In New York State, 70 percent of the voters approved a $1.15 billion bond issue to develop cleaner air and water, solid waste treatment, and the purchase of environmentally sensitive areas. In Florida, voters approved a $240 million bond issue to buy environmentally threatened lands. California voters approved a bill to create state and regional commissions to control coastal development. Boca Raton, Florida, voters set a ceiling on the number of housing units in that city.

Some of this concern smacks of protectionism and exclusiveness. All of it manifests a new concern for the total quality of life.

The Need for Land-use Planning

Modern urban and industrial growth is overwhelming our traditional systems of land management. More than 10,000 governments today regulate how land is to be used, though much land is under no zoning restrictions. The various levels of government cannot, however, function together to solve common problems of land use. Literally scores of federal organizations already have some responsibility over some aspects of land-use management.

Unrestrained and piecemeal spread of urban areas that enshrines growth as good in itself but often ignores social costs has spawned dreary suburbs, neon jungles, strip cities, widespread disregard of the earth's resources, and rising popular discontent.

But no-growth is no solution. No-growth policies of affluent localities are often selfishly inspired, designating development itself as the enemy, favoring the transfer to others of the implacable costs of life itself. The hard fact is that the needs of the U. S. population can only be met by continued development. An estimated 60 million people may be added to

the U. S. population by the end of the century, to be housed, fed, and provided with jobs. Between now and the year 2000 we may have to build a new home, school, hospital, or office building for every unit now in existence.

No one should believe, either, that metropolitan growth will lag. Today 95 percent of the U. S. population lives in, or within commuting range of, just 171 urban regions; two-thirds of us live on only 2 percent of the land area. Future population growth could be disconnected from our highly articulated system of urban regions only at enormous expense, if at all. As a result, the whole strategy of isolated "new towns" is open to grave scepticism.

Far from crowding, however, the typical U. S. family yearly uses more and more space. With higher incomes have come higher levels of consumption, more cars, more recreation, more travel, bigger homes, second vacation-homes, and therefore people using more space and spreading farther out over the land. To be sure, by 1985 the household formation rate will grow one-third faster than during the 1960–1970 decade. But, the urban land area is increasing far faster than the urban population or urban households, as American families spread themselves out over a wider range of living space.

Optimists about urban planning, however, ought not to confuse comforting words like *rational,* or *balanced,* or *orderly* with reality itself. Government at all levels is now stuffed full of narrowly defined units or special-purpose units engaged in "planning" land use. What is more, long-standing governmental policy has set land-use planning goals almost inadvertently, such as the depression-born farm policy, the suburbs-spawning FHA, and the Interstate Highway System. Indeed, for years the farm programs took land out of agricultural use while federal reclamation created more. In government, "rational is as rational does" should be the rule.

And in recent years, the conflict over protection versus development led us to cutting off our nose to spite our face. Energy industries, furnishing the basic power to an expanding population, lived through repeated delays in trying to build more supply. In several states—California, Florida, and New York among them—both fossil and nuclear plants were held up. The Alaska pipeline, and offshore drilling in the Gulf of Mexico and the Atlantic Coast, were also delayed year after year. Delaware ruled out refineries on its bayshore coastline.

Everyone wants power but not plants; this paradox of prosperity extends to other industries, and it leads more and more people to the conclusion that we must arrive at a new set of ground rules to meet the demand for improved environmental quality while providing the growth America must have for its future.

Economic growth requires the use of land for mineral development as

well as energy supply and use. The luxury of choice does not exist for mineral and energy development; it must occur only where the resources are located. And as our nation becomes more and more energy and mineral deficient, and thus dependent on foreign sources of supply, the value of land for development gets comparatively higher.

THE STATUS OF LAND-USE LAWS

There are plenty of state land-use laws on the books. Ten years ago Hawaii was the only state with land-use controls. By 1973, California, Colorado, Florida, Maine, and Vermont had asserted strong planning authority to directly control their land. Many other states approached land-use planning in other ways.

Hawaii, Vermont, and Maine had zoned all their land, possibly a harbinger of the future. Delaware and California had established strong coastal restrictions—in a country where half the people now live fifty miles or less from some coastal shoreline, including the Great Lakes. Colorado's proposal provided for state intervention in land-use planning when localities fail to act. And states were perking up their ears to the American Law Institute Model Land Development Code—also the federal proposals—to designate environmentally critical areas and regionally significant developments as a way of combining state and local responsibility for land-use planning.

Among the various federal proposals, Senator Jackson (D-Wash.) put forward in 1973 what was called the most far-reaching environmental bill ever considered by the Congress. The bill was short of being a national urban land-use policy; it was really an act to enable states to do planning review, leaving the vast majority of land-use decisions with the local governments.

Under the bill Congress would provide grants-in-aid and technical assistance to the states to help them develop knowledge, institutions, methods, and processes for land-use planning and management. The bill would have a substantial impact on decision-making in four "critical" areas—(1) key facilities, such as airports, major highway interchanges, and the like; (2) large-scale development, on non-federal lands, to be defined by the states; (3) areas of critical environmental concern, such as historic sites, natural hazard lands, renewable resource lands, and the like; and (4) land use and development of regional benefit, such as sewage treatment plant sites, low income housing, etc.

The findings of Congress set forth in the bill are revealing. They acknowledged a national interest in more efficient land-use planning; a lack of recognition of land-use impact of public and private programs; a lack of land-use planning; a lack of consultation with property owners, users, and the public in land-use decisions; a lack of federal agency attention to

land-use effects of agency programs; a hindering of significant land development resulting from failure to plan; and a failure of states and local governments to exercise adequately the primary constitutional authority and responsibility they have for land-use planning and management of non-federal land.

The bill would set up a land-use policy administration in the Interior Department and assign to the Secretary of the Interior the responsibility for administering the act. It would set up, as well, an inter-agency board with representatives from the Departments of Agriculture, Commerce, HEW, Transportation, Treasury, The Atomic Energy Commission, The Environmental Protection Agency, The Council on Environmental Quality, The Council of Economic Advisers, and the Office of Management and Budget; plus advisory members drawn from the states (2), localities (2), and regions (1). The federal machinery thus established would have the job of parcelling out the grants to the states as carrots, to get underway effective state-wide land-use planning processes in the first three fiscal years after the bill passed, and to get delivery within five fiscal years statewide programs of land use. The bill assigned a strong review function to the Secretary of the Interior, and it laid out in some detail the technical requirements for creating an effective process of planning.

The bill, which passed the Senate in 1972, had what one writer called "broad but shallow" support. Despite three years of hearings, the bill heavily emphasized procedures and abounded with loosely defined and ambiguous language, probably representing wise drafting for what nearly every legislator knows in his bones would have interfered with the property rights of homeowners and developers as well as the zoning powers and actions of towns and suburbs. However, legislators also knew that environmental improvement was one of the few policy proposals that attracted voters in the 1972 elections to favor increased spending. Of the 57 candidates for Senate, House, and gubernatorial posts endorsed by the League of Conservation Voters, 43 from 25 states were successful.

No one thought the Jackson bill was going to solve the nation's land-use problems. It really would have just gotten us on a start toward statewide planning. One criticism of the bill as drafted at hearing time was its lack of balance. One way to get balance is through the principle of compatible multiple uses of land. This principle, employed early in the history of federal land management, could have been effected by setting performance standards for lands. This approach, quite important for example in tidal lands, simply pushes off onto land users the costs of meeting the desired standards, thus internalizing these costs in the price of that land use.

RESOURCES AND PROPERTY RIGHTS

The principle of performance standards for multiple uses of land gets

this discussion around to the larger questions of the effect of federal legislation. It would seem that, to be effective, a program of land use should:

—Recognize and maintain the value of the private decision-making process.
—Balance economic and other considerations.
—Provide for compatible uses of lands and waters.
—Put the main burden on states or interstate regions to execute and on the federal government to review and enforce state and regional plans, give financial aid, and balance regional, state, and local needs with the national interest.

These principles, operating together, produce a kind of land-use policy consistent with competitive enterprise and the protection of private property rights in accord with sound environmental, economic, and social values.

There is no doubt, for example, that we as a people have the resources of knowledge that could vastly improve our inventory and our planning methods in land use, if they are applied. What nobody wants is the antiquated and rigid methodology of physical planning to be spread out, at this late date, throughout the states and even between states. This is certainly not the time for a proliferation of the decision-making process of local governments to state levels and on to the federal level.

It is also no time for building a cumbersome framework, called "rational planning" but ending up in adding layer upon layer of narrow and bureaucratic approaches to "impact statements," "enabling provisions," and the like. Once imbedded in the federal judicial process, such legal-planning processes only create developmental sludge, judicial myopia, and red-tape jungles to stifle all but the most ponderous business units.

A lot can be done, legislatively, with brief statements of policy, such as the Employment Act of 1946, compared with compendiums such as some of our taxation and housing legislation. And the reason for wishing the former needs no explaining to the businessman who now has to get 20 permits from as many agencies, or who discovers in mid-passage requirements that spring up like jonquils in early spring.

The Jackson bill was only a beginning of federal interest in land-use planning. Things to come could be explored by a look at the 1973 report, "Land Use and Urban Growth," for the Task Force on Land Use and Urban Growth, chaired by Laurence Rockefeller, of the Citizen's Advisory Committee on Environmental Quality.

The report had strong recommendations on public acquisition of greenspace and preservation of historic sites. But it argued as a concept for tougher restrictions on the use of privately-owned land in order to protect "critical environmental and cultural areas." These restrictions, it believed, have to be upheld by the courts so as to be borne without payment by the government, thus relating the restrictions to the "takings" issue;

that is, the proscription in the Fifth Amendment to the Constitution, ". . . nor shall private property be taken for public use, without just compensation."

The report argued for a new body of environmental law regarding land use, marked by shifting the burden of proof onto proponents of changes in natural ecosystems to demonstrate the nature and extent of the resulting changes. It urged the Supreme Court to reexamine precedents holding for a balancing of public benefit against land value loss. In the protection of natural, cultural, or aesthetic resources, as the report recommended, a mere loss of land value should not justify invalidating the regulation of land use.

In other regards, the report also showed a trend toward reshaping property rights in the development of communities and regions, in terms of greater recognition that land is a natural and community resource subject to depletion, that recreation land is irreplaceable, and that even developmental rights themselves are separable from land ownership and might be separated from it in the way we presently separate mineral rights from land ownership.

OUR OWN DESTINY

In summary, by 1973 land-use legislative and study proposals were moving the United States further toward a national land-use policy that tries to balance environmental protection and economic development. They signified a new public understanding that land is, at least in some respects, an irreplaceable natural and community resource and not merely a commodity for buying and selling. Based on exquisitely patient scientific study, this realization of the "connectedness of life," far from a passing fancy, generates public conviction of great energy and force, not likely to be denied, but if anything to gather momentum, in coming years.

In short, our 300 years of footloose expansion over de Tocqueville's "boundless continent" is effectively at an end. There may be plenty of room out where the deer and the antelope play; but private property will be conditioned in the future by the realization that "This land is your land, this land is my land, from California to the New York Island, from the Redwood Forest to the Gulf Stream waters."

As we try to learn what we do not now know—and that is how to build communities in our great urban regions that are environmentally sound and racially open—we are going to live through a period of great ferment. Conservation alone is not the issue, but neither any longer can sheer economic growth alone maintain supremacy. Both conservation and economic growth must become part of a larger effort. We must learn how to create in our land, communities that we want, that respect the laws of man and nature, and that balance growth and environmental objectives.

For years it has been good enough for developers of both home and

business properties to solve the problems of urban facilities for living and working by lavish use of energy both in buildings and in cities, often indifferent to the liquidation of more and more natural features of the landscape. As a business magazine says, "They have taken over the wetlands, filled in the ponds, planed down the hills, put the streams in pipes." And up to recently, to do so has been to give the people of the U. S. the suburban dream house that they wanted.

Now, however, the nation wants something better than mile upon mile of monotonous brick and asphalt, acre on acre of barren suburban landscape, and the substitution of manmade artifact for the plant and animal life that keeps the natural air and water processes in balance. Businessmen are caught in the middle of a great shift in national values that will require new standards of business competence and complex trade-offs that create new definitions of wealth in natural surroundings.

The answer is obvious to state but difficult to attain. It is to develop new framework rules that fully reflect the realism of scientific knowledge about the environment, that assign to it the right priority, and that balance the benefits of freedom and growth against the irreplaceable value of natural processes. The issue of land-use planning is not an issue of "solving problems" but of reexamining and recreating processes of planning in both business and government, processes that reflect and embody both our knowledge of economic growth and our new knowledge of and respect for the environment.

The worst solution would be to recoil from the hitherto unpaid costs of growth to adopt rigid and out-dated physical planning controls. They would lock into the concrete of legalistic haggling all the dynamism of which the enterprise system has been and can continue to be so capable.

Not much better an approach, however, is a response from business itself that would see government drag industry, kicking and screaming, face to face with the realization that our common interest and that of our children's children in survival on earth with decent air to breathe and water to drink does have precedence over the fate of particular methods of energy and mineral development, house-building financing, and property transfer.

Equally bad would be to throw out the baby of private ownership and private competitive enterprise in a burst of intellectual arrogance that attributes the general ignorance of the past, shared by business, government, and consumer, to business itself as the creator of the artifacts of the past. In a society that swims in a sea of new knowledge, what can be more arrogant than to blame the ignorance of the past for leaving undone the tasks of the future?

To the extent that we all accept the premises of science, try to understand them, and adapt new knowledge to our priceless values of freedom and shared knowledge and power, applied always with the restraints of

checks, balances, and respect for truth, we have a chance to build together a new republic, even in the third century of this nation.

Perhaps we need to heed still the sad admonition of Chief Sealth of the Duwamish Tribe, who wrote to President Pierce in 1855, in part as follows:

> When the last redman has vanished from the earth, and the memory is only the shadow of a cloud moving across the prairie, these shores and forests will still hold the spirit of my people, for they love this earth as the newborn loves its mother's heartbeat. If we sell you our land, love it as we've loved it. Care for it, as we've cared for it. Hold in your mind the memory of the land, as it is when you take it. And with all your strength, with all your might, and with all your heart—preserve it for your children, and love it as God loves us all. One thing we know—our God is the same. This earth is precious to him. Even the white man cannot be exempt from the common destiny.

The author wishes to acknowledge the generous assistance in research and writing of Dr. Paul A. Reardon, economist, Chamber of Commerce of the United States; with help from an exchange of views with Dr. Arch N. Woodruff, Chancellor, University of Hartford.