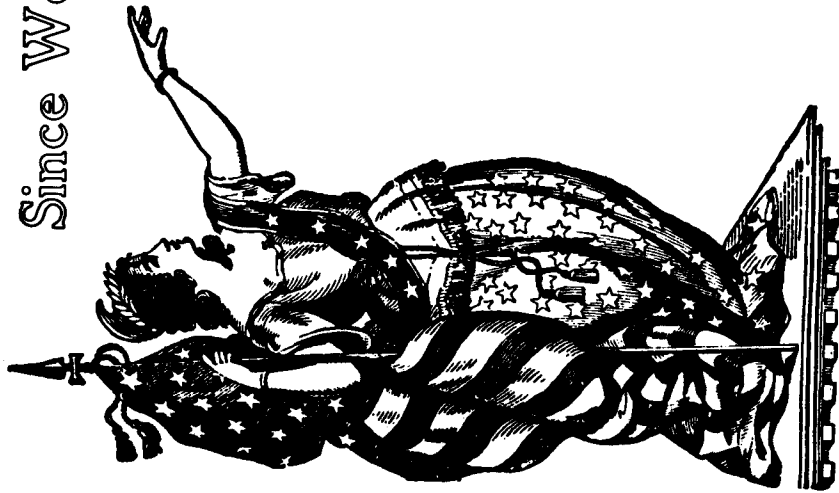


From Conservation to Environmental Environmental Politics in the United States Since World War Two



Samuel P. Hays
University of Pittsburgh

Environmental Era themselves. My argument will emphasize change rather than continuity. In historical analyses we are constantly forced to cope with the problem of sorting out the strands of continuous evolution from the discontinuities which mark new directions. When we are close to a broad social and political change, displaying elements of what we call social movements, we often depart from that task by a temptation to ferret out "roots" in order to give historical meaning and significance to them. So it is with the "environmental movement." Here I prefer a larger view, shaped by the overarching historical problem of identifying patterns of continuity and change. Where do environmental affairs fit in those larger patterns of evolution in 20th century American society and politics? In my view that "fit" lies in an emphasis on the massive changes in America after World War II and on the War itself as a historical dividing point.

The Conservation and Environmental Impulses

Prior to World War II, before the term "environment" was hardly used, the dominant theme in conservation emphasized physical resources, their more efficient use and development. The range of emphasis evolved from water and forests in the late 19th and early 20th centuries, to grass and soils and game in the 1930's. In all these fields of endeavor there was a common concern for the loss of physical productivity represented by waste. The threat to the future which that "misuse" implied could be corrected through "sound" or efficient management. Hence in each field there arose a management system which emphasized a balancing of immediate in favor of more long-run production, the coordination of factors of production under central management schemes for the greatest efficiency. All this is a chapter in the history of production rather than of consumption, and of the way in which managers organized production rather than the way in which consumers evolved ideas and action amid the general public.

Enough has already been written about the evolution of multiple-purpose river development and sustained-yield forestry to establish their role in this context of efficient management for commodity production.¹ But perhaps a few more words could be added for those resources which came to public attention after World War I. Amid the concern about soil erosion, from both rain and wind, the major stress lay in warnings about the loss of agricultural productivity. What had taken years to build up over geologic time now was threatened with destruction by short-term practices. The soil conservation program inaugurated in 1933 gave rise to a full-scale attack on erosion problems which was carried out amid almost inspired religious fervor.² In the Taylor Grazing Act of 1934 the nation's grazing lands in the West were singled out as a special case of deteriorating productivity; it set in motion a long-term drive to reduce stocking levels and thereby permit recovery of the range.³ Also during the 1930's, scientific game management came into its own with the Pittman-Robertson Act of 1936 which provided funds.⁴ This involved concepts much akin to those in forestry, in which production and consumption of game would be balanced in such a fashion so as not to outrun food resources and hence sustain a continuous yield.

Perhaps the most significant vantage point from which to observe the common processes at work in these varied resource affairs was the degree to which resource managers thought of themselves as engaged in a common venture. It was not difficult to bring into the overall concept of "natural resources" the management of forests and waters, of soils and grazing lands, and of game. State departments of "natural resources" emerged, such as in Michigan, Wisconsin and Minnesota, and some univer-

The historical significance of the rise of environmental affairs in the United States in recent decades lies in the changes which have taken place in American society since World War II. Important antecedents of those changes, to be sure, can be identified in earlier years as "background" conditions on the order of historical forerunners. But the intensity and force, and most of the substantive direction of the new environmental social and political phenomenon can be understood only through the massive changes which occurred after the end of the War and not just in the United States but throughout advanced industrial societies.

Such is the argument of this article. I will identify a variety of ways in which one can distinguish the old from the new, the pre- from the post-war, and sequential changes within the decades of the

sity departments of forestry became departments of natural resources -- all this as the new emphases on soils and game were added to the older ones on forests and waters.⁵ By the time of World War II a complex of professionals had come into being, with a strong focus on management as their common task, on the organization of applied knowledge about physical resources so as to sustain output for given investments of input under centralized management direction. This entailed a common conception of "conservation" and a common focus on "renewable resources," often within the rubric of advocating "wise use" under the direction of professional experts.⁶

During these years another and altogether different strand of activity also drew upon the term "conservation" to clash with the thrust of efficient commodity management. Today we frequently label it with the term "preservation" as we seek to distinguish between the themes of efficient development symbolized by Gifford Pinchot and natural environment management symbolized by John Muir. Those concerned with national parks and the later wilderness activities often used the term "conservation" to describe what they were about. In the Sierra Club the "conservation committees" took up the organization's political action in contrast with its outings. And those who formed the National Parks Association and later the Wilderness Society could readily think of themselves as conservationists, struggling to define the term quite differently than did those in the realm of efficient management. Even after the advent of the term "environment" these groups continued to identify themselves as "conservationists" such as in the League of Conservation Voters, especially when they wished to draw together the themes of natural environment lands and environmental protection. The National Parks Association sought to have the best of both the old and the new when it renamed its publication, *The National Parks and Conservation Magazine: The Environmental Journal*.⁷

Prior to World War II the natural environment movement made some significant gains. One thinks especially of the way in which Pinchot was blocked from absorbing the national parks under his direction in the first decade of the century and then, over his objections, advocates of natural environment values succeeded in establishing the National Park Service in 1916. Then there was the ensuing struggle of several decades in which an aggressive Park Service was able to engage the Forest Service in a contest for control of land and on many occasions won. One of the best described of these events concerns the establishment of the Olympic National Park in 1937, a former national monument under Forest Service jurisdiction until Franklin D. Roosevelt transferred all the monuments to the Park Service in June of 1933; in 1937 it was expanded by the addition of considerable acreage from the surrounding national forest.⁸ Despite all this, however, the theme of management efficiency in physical resource development dominated the scene prior to World War II and natural environment programs continued to play a subordinate role.

After the War a massive turnabout of historical forces took place. The complex of specialized fields of efficient management of physical resources increasingly came under attack amid a new "environmental" thrust. It contained varied components. One was the further elaboration of the outdoor recreation and natural environment movements of pre-War, as reflected in the Wilderness Act of 1964, the Wild and Scenic Rivers Act of 1968, and the National Trails Act of the same year, and further legislation and administrative action on through the 1970's. But there were other strands even less rooted in the past. The most extensive was the concern for environmental pollution, or "environmental protection"

as it came to be called in technical and managerial circles. While smoldering in varied and diverse ways in this or that setting from many years before, this concern burst forth to national prominence in the mid-1960's and especially in air and water pollution. And there was the decentralist thrust, the search for technologies of smaller and more human scale which complement rather than dwarf the more immediate human setting. One can find decentralist ideologies and even affirmations of smaller-scale technologies in earlier years, such as that inspired by Ralph Borsodi not long before World War II.⁹ But the intensity and direction of the drive of the 1970's was of a vastly different order. The search for a "sense of place," for a context that is more manageable intellectually and emotionally amid the escalating pace of size and scale had not made its mark in earlier years as it did in the 1970's to shape broad patterns of human thought and action.

One of the most striking differences between these post-War environmental activities, in contrast with the earlier conservation affairs, was their social roots. Earlier one can find little in the way of broad popular support for the substantive objectives of conservation, little "movement" organization, and scanty evidence of broadly shared conservation values. The drive came from the top down, from technical and managerial leaders. In the 1930's one can detect a more extensive social base for soil conservation, and especially for new game management programs.



But, in sharp contrast, the Environmental Era displayed demands from the grass-roots, demands that are well charted by the innumerable citizen organizations and studies of public attitudes. One of the major themes of these later years, in fact, was the tension that evolved between the environmental public and the environmental managers, as impulses arising from the public clashed with impulses arising from management. This was not a new stage of public activity per se, but of new values as well. The widespread expression of social values in environmental action marks off the environmental era from the conservation years.

It is useful to think about this as the interaction between two sets of historical forces, one older that was associated with large-scale management and technology, and the other newer that reflected new types of public values and demands.¹⁰ The term "environment" in contrast with the earlier term "conservation" reflects more precisely the innovations in values. The technologies with which these values clashed in the post-war years, however, were closely aligned in spirit and historical roots with earlier conservation tendencies, with new stages in the evolution from the earlier spirit of scientific management of which conservation had been an integral part. A significant element of the historical analysis, therefore, is to identify the points of tension in the Environmental Era between the new stages of conservation as efficient management, as it became more highly elaborated, and the newly evolving environmental concerns which displayed an altogether different thrust. Conflicts between older "conservation" and newer "environment" help to identify the nature of the change.

One set of episodes in this tension concerned the rejection of

multiple-purpose river structures in favor of free flowing rivers; here was a direct case of irreconcilable objectives, one stemming from the conservation era, and another inherent in the new environmental era. There were cases galore. But perhaps the most dramatic one, which pinpoints the watershed between the old and the new, involved Hell's Canyon on the Snake River in Idaho.¹¹ For many years that dispute had taken the old and honorable shape of public versus private power. Should there be one high dam, constructed with federal funds by the Bureau of Reclamation, or three lower dams to be built by the Idaho Power Company? These were the issues of the 1930's, the Truman years and the Eisenhower administrations. But when the Supreme Court reviewed a ruling of the Federal Power Commission on the issue in 1968, it pointed out in a decision written by Justice Douglas that another option had not been considered - no dam at all. Perhaps the river was more valuable as an undeveloped, free flowing stream. The decision was unexpected both to the immediate parties to the dispute, and also to "conservationists" in Idaho and the Pacific Northwest. In fact, those conservationists had to be persuaded to become environmentalists. But turn about they did. The decision seemed to focus a perspective which had long lain dormant, implicit in the circumstances but not yet articulated, and reflected a rather profound transformation in values which had already taken place.

There were other realms of difference between the old and the new. There was, for example, the changing public conception of the role and meaning of forests.¹² The U.S. Forest Service, and the entire community of professional foresters, continued to elaborate the details of scientific management of wood production; it took the form of increasing input for higher yields, and came to emphasize especially even-aged management. But an increasing number of Americans thought of forests as environments for home, work and play, as an environmental rather than as a commodity resource, and hence to be protected from incompatible crop-oriented strategies. Many of them bought woodlands for their environmental



rather than their wood production potential. But the forestry profession did not seem to be able to accept the new values. The Forest Service was never able to "get on top" of the wilderness movement to incorporate it in "leading edge" fashion into its own strategies. As the movement evolved from stage to stage the Service seemed to be trapped by its own internal value commitments and hence relegated to playing a rear-guard role to protect wood production.¹³ Many a study conducted by the Forest Service experiment stations and other forest professionals made clear that the great majority of small woodland owners thought of their holdings as environments for wildlife and their own recreational and residential activities; yet the service forester program conducted by the Forest Service continued to emphasize wood production rather than environmental amenities as the goal of woodland management. The diverging trends became sharper with the steadily accumulating environmental interest in amenity goals in harvesting strategies and the expanding ecological emphases on more varied plant and animal life within the forest.¹⁴

There were also divergent tendencies arising from the soil conservation arena. In the early 1950's, the opposition of farmers to the high-dam strategies of the U.S. Army Corps of Engineers led to a new program under the jurisdiction of the Soil Conservation Service, known as PL 566, which emphasized the construction of smaller headwater dams to "hold the water where it falls." This put the SCS in the business of rural land and water development, and it quickly took up the challenge of planning a host of such "multiple-use" projects which combined small flood control reservoirs with flat-water recreation and channelization with wetland drainage.¹⁵ By the time this program came into operation, however, in the 1960's, a considerable interest had arisen in the natural habitats of headwater streams, for example for trout fishing, and wetlands for both fish and wildlife. A head-on collision on this score turned an agency which had long been thought of as riding the lead wave of conservation affairs into one which appeared to environmentalists to be no better than the Corps - development minded and at serious odds with newer natural environment objectives.¹⁶

There was one notable exception to these almost irreconcilable tensions between the old and the new in which a far smoother transition occurred - the realm of wildlife. In this case the old emphasis on game was faced with a new one on nature observation or what came to be called a "non-game" or "appreciative" use of wildlife.¹⁷ Between these two impulses there were many potential arenas for deep controversy. But there was also common ground in their joint interest in wildlife habitat. The same forest which served as a place for hunting also served as a place for nature observation. In fact, as these different users began to be identified and counted it was found that even on lands acquired exclusively for game management the great majority of users were non-game observers. As a result of this shared interest in wildlife habitat it was relatively easy for many "game managers" to shift in their self-conceptions to become "wildlife managers." Many a state agency changed its name from "game" to "wildlife" and an earlier document, "American Game Policy, 1930," which guided the profession for many years, became "The North American Wildlife Policy, 1973."¹⁸

If we examine the values and ideas, then, the activities and programs, the directions of impulses in the political arena, we can observe a marked transition from the pre-World War II conservation themes of efficient management of physical resources, to the post-World War environmental themes of environmental amenities, environmental protection, and human scale technology. Something new was happening in American society, arising out of the social changes and transformation in human values in the post-war years. These were associated more with the advanced consumer society of those years than with the industrial manufacturing society of the late 19th and the first half of the 20th centuries. Let me now root these environmental values in these social and value changes.

The Roots of New Environmental Values

The most immediate image of the "environmental movement" consists of its "protests," its objections to the extent and manner of development and the shape of technology. From the media evidence one has a sense of environmentalists blocking "needed" energy projects, dams, highways and industrial plants, and of complaints of the environmental harm generated by pollution. Environmental action seems to be negative, a protest affair. This impression is also heavily shaped by the "environmental impact" mode of analysis which identifies the "adverse effects" of development and presumably seeks to avoid or mitigate them.

The question is one of how development can proceed with the "least" adverse effect to the "environment." From this context of thinking about environmental affairs one is tempted to formulate an environmental history based upon the way in which technology and development have created "problems" for society to be followed by ways in which action has been taken to cope with those problems.

This is superficial analysis. For environmental impulses are rooted in deep seated changes in recent America which should be understood primarily in terms of new positive directions. We are at a stage in history when new values and new ways of looking at ourselves have emerged to give rise to new preferences. These are characteristic of advanced industrial societies throughout the world, not just in the United States. They reflect two major and widespread social changes. One is associated with the search for standards of living beyond necessities and conveniences to include amenities made possible by considerable increases in personal and social "real income." The other arises from advancing levels of education which have generated values associated with personal creativity and self-development, involvement with natural environments, physical and mental fitness and wellness and political autonomy and efficacy. Environmental values and objectives are an integral part of these changes.

Extensive study of attitudes and values by public opinion analysts and sociologists chart these larger changes in social values in considerable detail.¹⁹ Some have brought them together in comprehensive accounts. They can be best observed in the market analyses which have been sponsored by the American business community since the 1920's which gave rise to the initial interest in attitude surveys. Such analyses have identified value changes in almost every sub-group in the American population, from different ages to ethnic and religious variations, to regional differences and rural-urban distinctions. Two of the most comprehensive and long-term studies are now in progress, financed by American business corporations, one the Values and Lifestyles Study (VALS) conducted by Arnold Johnson at Stanford Research Institute and the other, emphasizing content analysis of newspapers, being undertaken by John Naisbett, associated with the firm of Yankelovitch, Skelly and White in Washington, D.C.²⁰

From these more general surveys, from studies specifically of environmental values, from analyses of recreational and leisure preferences undertaken by leisure research specialists, from surveys of the values expressed by those who purchase natural environment lands, and from the content of environmental action in innumerable grass-roots citizen case one can identify the "environmental impulse" not as reactive but formative.²¹ It reflects a desire for a better "quality of life" which is another phase of the continual search by the American people throughout their history for a higher standard of living. Environmental values are widespread in American society, extending throughout income and occupational levels, areas of the nation and racial groups, somewhat stronger in the middle sectors and a bit weaker in the very high and very low groupings.²² There are identifiable "leading sectors" of change with which they are associated as well as "lagging sectors." They tend to be stronger with younger people and increasing levels of education and move into the larger society from those centers of innovation. They are also more associated with particular geographical regions such as New England, the Upper Lakes States, the Upper Rocky Mountain region and the Far West, while the South, the Plains States and the lower Rockies constitute "lagging" regions.²³ Hence one can argue that environmental values have expanded steadily in American society, associated with demographic sec-

tors which are growing rather than with those which are more stable or declining.

Within this general context one can identify several distinctive sets of environmental tendencies. One was the way in which an increasing portion of the American people came to value natural environments as an integral part of their rising standard of living. They sought out many types of such places to experience, to explore, enjoy and protect: high mountains and forests, wetlands, ocean shores, swamplands, wild and scenic rivers, deserts, pine barrens, remnants of the original prairies, places of relatively clean air and water, more limited "natural areas."²⁴ Interest in such places was not a throwback to the primitive, but an integral part of the modern standard of living as people sought to add new "amenity" and "aesthetic" goals and desires to their earlier preoccupation with necessities and conveniences. These new consumer wants were closely associated with many others of a similar kind such as in the creative arts, recreation and leisure in general, crafts, indoor and household decoration, hi-fi sets, the care of yards and gardens as living space and amenity components of necessities and conveniences. Americans experienced natural environments both emotionally and intellectually, sought them out for direct personal experience in recreation, studied them as objects of scientific and intellectual interest and desired to have them within their community, their region and their nation as symbols of a society with a high degree of civic consciousness and pride.²⁵

A new view of health constituted an equally significant innovation in environmental values, health less as freedom from illness and more as physical and mental fitness, of feeling well, of optimal capability for exercising one's physical and mental powers.²⁶ The control of infectious diseases by antibiotics brought to the fore new types of health problems associated with slow, cumulative changes in physical condition, symbolized most strikingly by cancer, but by the 1980's ranging into many other conditions such as genetic and reproductive problems, degenerative changes such as heart disease and deteriorating immune systems. All this put more emphasis on the non-bacterial environmental causes of illness but, more importantly, brought into health matters an emphasis on the positive conditions of wellness and fitness. There was an increasing tendency to adopt personal habits that promoted rather than threatened health, to engage in physical exercise, to quit smoking, to eat more nutritiously and to reduce environmental threats in the air and water that might also weaken one's wellness. Some results of this concern were the rapid increase in the business of health food stores, reaching \$1.5 billion in 1979,²⁷ the success of the Rodale enterprises and their varied publications such as *Prevention* and *Organic Gardening*, and the increasing emphasis on preventive medicine.²⁸

These new aesthetic and health values constituted much of the roots of environmental concern. They came into play in personal life and led to new types of consumption in the private market, but they also led to demands for public action both to enhance opportunities, such as to make natural environments more available and to ward off threats to values. The threats constituted some of the most celebrated environmental battles: power and petrochemical plant siting, hardrock mining and strip mining, chemicals in the workplace and in underground drinking water supplies, energy transmission lines and pipelines.²⁹ Many a local community found itself faced with a threat imposed from the outside and sought to protect itself through "environmental action." But the incidence and intensity of reaction against these threats arose at a particular time in history because of the underlying changes in values and aspirations. People had new preferences and new personal and family values which they did not

have before. Prior to World War II, the countryside, that area between the nation's cities and its wildlands, had been an area of rapid decline, a land much of which "nobody wanted," but in the years after the War it became increasingly occupied and hence defended.³⁰ Here was a major battleground for the contending environmental and developmental antagonists. Because of these new values developmental activities which earlier might have been accepted were now considered to be on balance more harmful than beneficial.

Still another concern began to play a more significant role in environmental affairs in the 1970's - an assertion of the desirability of more personal family and community autonomy in the face of the larger institutional world of corporate industry and government, an affirmation of smaller in the face of larger contexts of organization and power. This constituted a "self-help" movement. It was reflected in numerous publications about the possibilities of self-reliance in production of food and clothing, design and construction of homes, recreation and leisure, recycling of wastes and materials, and use of energy through such decentralized forms as wind and solar. These tendencies were far more widespread than institutional and thought leaders of the nation recognized since their world of perception and management was far removed from community and grass-roots ideas and action. The debate between "soft" and "hard" energy paths seemed to focus much of the controversy over the possibilities of decentralization.³¹ But it should also be stressed that the American economy, while tending toward more centralized control and management, also generated products which made individual choices toward decentralized living more possible and hence stimulated this phase of environmental affairs. While radical change had produced large-scale systems of management it had also reinvigorated the more traditional Yankee tinkerer who now found a significant niche in the new environmental scheme of things.

Several significant historical tendencies are integral parts of these changes. One involves consumption and the role of environmental values as part of evolving consumer values.³² At one time, perhaps as late as 1900, the primary focus in consumption was on necessities. By the 1920's a new stage had emerged which emphasized conveniences in which the emerging consumer durables, such as the automobile and household appliances were the most visible elements. This change meant that a larger portion of personal income, and hence of social income and production facilities were now being devoted to a new type of demand and supply. By the late 1940's a new stage in the history of consumption had come into view. Many began to find that both their necessities and conveniences had been met and an increasing share of their income could be devoted to amenities. The shorter work week and increasing availability of vacations provided opportunities for more leisure and recreation. Hence personal and family time and income could be spent on amenities. Economists were inclined to describe this as "discretionary income." The implications of this observation about the larger context of environmental values is that it is a part of the history of consumption rather than of production. That in itself involves a departure from traditional emphases in historical analysis.

Another way of looking at these historical changes is to observe the shift in focus in daily living from a preoccupation with work in earlier years to a greater role for home, family and leisure in the post-War period. Public opinion surveys indicate a persistent shift in which of these activities respondents felt were more important, a steady decline in a dominant emphasis on work and a steady rise in those activities associated with home, family and leisure. One of the most significant

aspects of this shift was a divorce in the physical location of work and home. For most people in the rapidly developing manufacturing cities of the 19th century the location of home was dictated by the location of work. But the widespread use of the automobile, beginning in the 1920's, enabled an increasing number of people, factory workers as well as white collar workers, to live in one place and to work in another. The environmental context of home, therefore, came to be an increasingly separate and distinctive focus for their choices. Much of the environmental movement arose from this physical separation of the environments of home and work.

One can identify in all this an historical shift in the wider realm of politics as well. Prior to World War II the most persistent larger context of national political debate involved the balance among sectors of production. From the late 19th century on the evolution of organized extra-party political activity, in the form of "interest groups", was overwhelmingly devoted to occupational affairs, and the persistent policy issues involved the balance of the shares of production which were to be received by business, agriculture and labor, and sub-sectors within them. Against this array of political forces consumer objectives were woefully weak. But the evolution of new types of consumption in recreation, leisure and amenities generated a quite different setting. By providing new focal points of organized activity in common leisure and recreational interest groups, and by emphasizing community organization to protect community environmental values against threats from external developmental pressures, consumer impulses went through a degree of mobilization and activity which they had not previously enjoyed. In many an instance they were able to confront developmentalists with considerable success. Hence environmental action reflects the emergence in American politics of a new effectiveness for consumer action not known in the years before the War.

One of the distinctive aspects of the history of consumption is the degree to which what once were luxuries, enjoyed by only a few, over the years became enjoyed by many - articles of mass consumption. In the censuses of the last half of the 19th century several occupations were identified as the "luxury trades," producing items such as watches and books which later became widely consumed. Many such items went through a similar process, arising initially as enjoyed only by a relative few and then later becoming far more widely diffused. These included such consumer items as the wringer washing machine and the gas stove, the carpet sweeper, indoor plumbing and the automobile. And so it was with environmental amenities. What only a few could enjoy in the 19th century came to be mass activities in the mid-20th, as many purchased homes with a higher level of amenities around them and could participate in outdoor recreation beyond the city. Amid the tendency for the more affluent to seek out and acquire as private property the more valued natural amenity sites, the public lands came to be places where the opportunity for such activities remained far more accessible to a wide segment of the social order.

A major element of the older, pre-World War II "conservation movement," efficiency in the use of resources, also became revived in the 1970's around the concern for energy supply. It led to a restatement of rather traditional options, as to whether or not natural resources were limited, and hence one had to emphasize efficiency and frugality, or whether or not they were unlimited and could be developed with unabated vigor. Environmentalists stressed the former. It was especially clear that the "natural environments" of air, water and land were finite, and that increasing demand for these amid a fixed supply led to considerable

inflation in price for those that were bought and sold in the private market. Pressures of growing demand on limited supply of material resources appeared to most people initially in the form of inflation; this trend of affairs in energy was the major cause of inflation in the entire economy. The great energy debates of the 1970's gave special focus to a wide range of issues pertaining to the "limits to growth." 33 Environmentalists stressed the possibilities of "conservation supplies" through greater energy productivity and while energy producing companies objected to this as a major policy alternative, industrial consumers of energy joined with household consumers in taking up efficiency as the major alternative. In the short run the "least cost" option in energy supply in the private market enabled the nation greatly to reduce its energy use and carried out the environmental option. 34

In accounting for the historical timing of the environmental movement one should emphasize changes in the "threats" as well as in the values. Much of the shape and timing of environmental debate arose from changes in the magnitude and form of these threats from modern technology. That technology was applied in increasing scale and scope, from enormous drag-lines in strip mining, to 1000-megawatt electric generating plants and "energy parks," to superports and large-scale petrochemical plants, to 765-kilovolt energy transmission lines. And there was the vast increase in the use and release into the environment of chemicals, relatively contained and generating a chemical "sea around us" which many people considered to be a long-run hazard that was out of control. The view of these technological changes as threats seemed to come primarily from their size and scale, the enormity of their range of impact, in contrast with the more human scale of daily affairs. New technologies appeared to constitute radical influences, disruptive of settled community and personal life, of a scope that was often beyond comprehension, and promoted and carried through by influences "out there" from the wider corporate and governmental world. All this brought to environmental issues the problem of "control," of how one could shape more limited personal and community circumstance in the face of large-scale and radical change impinging from afar upon daily life. 35

Stages in the Evolution of Environmental Action

Emerging environmental values did not make themselves felt all in the same way or at the same time. Within the context of our concern here for patterns of historical change, therefore, it might be well to secure some sense of stages of development within the post-World War II years. The most prevalent notion is to identify Earth Day in 1970 as the dividing line. There are other candidate events, such as the publication of Rachel Carson's *Silent Spring* in 1962, and the Santa Barbara oil blowout in 1969. 36 But in any event definition of change in these matters seems to be inadequate. Earth Day was as much a result as a cause. It came after a decade or more of underlying evolution in attitudes and action without which it would not have been possible. Many environmental organizations, established earlier, experienced considerable growth in membership during the 1960's, reflecting an expanding concern. 37 The regulatory mechanisms and issues in such fields as air and water pollution were shaped then; for example the Clean Air Act of 1967 established the character of the air quality program more than did that of 1970. General public awareness and interest were expressed extensively in a variety of public forums and in the mass media. Evolving public values could be observed in the growth of the outdoor recreation movement which reached back into the 1950's and the search for amenities in quieter and more natural settings, in the increasing number of people who engaged in hiking and camping or purchased recreational lands and homes on the seashore, by lakes and in woodlands.

This is not to say that the entire scope of environmental concerns emerged fully in the 1960's. It did not. But one can observe a gradual evolution rather than a sudden outburst at the turn of the decade, a cumulative social and political change that came to be expressed vigorously even long before Earth Day. 38

We might identify three distinct stages of evolution. Each stage brought a new set of issues to the fore without eliminating the previous ones, in a set of historical layers. Old issues persisted to be joined by new ones, creating over the years an increasingly complex and varied world of environmental controversy and debate. The initial complex of issues which arrived on the scene of national politics emphasized natural environment values in such matters as outdoor recreation, wildlands and open space. These shaped debate between 1957 and 1965 and constituted the initial thrust of environmental action. After World War II the American people, with increased income and leisure time, sought out the nation's forests and parks, its wildlife refuges, its state and federal public lands, for recreation and enjoyment. Recognition of this growing interest and the demands upon public policy which it generated, led Congress in 1958 to establish the National Outdoor Recreation Review Commission which completed its report in 1962. 39 Its recommendations heavily influenced public policy during the Johnson administration, leading directly to the Land and Water Conservation Fund of 1964 which established, for the first time, a continuous source of revenue for acquisition of state and federal outdoor recreation lands. It accelerated the drive for the National Wilderness Act of 1964 and the Wild and Scenic Rivers and National Trails Acts of 1968.

These laws reflected in only a limited way a much more widespread interest in natural environment affairs which affected local, state and federal policy. During the 1950's many in urban areas had developed a concern for urban overdevelopment and the need for open space in their communities. This usually did not receive national recognition because it took place on a more local level. But demands for national assistance for acquisition of urban open space led to legislation in 1960 which provided federal funds. The concern for open space extended to regional as well as community projects, involving a host of natural environment areas ranging from pine barrens to wetlands to swamps to creeks and streams to remnants of the original prairies. Throughout the 1960's there were attempts to add to the national park system which gave rise to new parks such as Canyonlands in Utah, new national lakeshores and seashores and new national recreation areas.

These matters set the dominant tone of the initial phase of environmental concern until the mid-1960's. They did not decline in importance, but continued to shape administrative and legislative action as specific proposals for wilderness, scenic rivers or other natural areas emerged to be hotly debated. Such general measures as the Eastern Wilderness Act of 1974, the Federal Land Planning and Management Act of 1976 and the Alaska National Interest Lands Act of 1980 testified to the perennial public concern for natural environment areas. So also did the persistent evolution of indigenous western wilderness groups in almost every state and the formation of a western umbrella organization, the Wilderness Alliance, headquartered in Denver, in 1978. 40 One might argue that these were the most enduring and fundamental environmental issues throughout the two decades. While other citizen concerns might ebb and flow, interest in natural environment areas persisted steadily. That interest was the dominant reason for membership growth in the largest environmental organizations. The Nature Conservancy, a private group which emphasized acquisition of natural environment lands, grew in activity in the latter

years of the 1970's and reached 100,000 members in 1981; this only further emphasized the persistent and enduring public concern for natural environment areas as an integral and important element of American life.⁴¹

Amid this initial stage of environmental politics there evolved a new and different concern for the adverse impact of industrial development with a special focus on air and water pollution. This had long evolved slowly on a local and piecemeal basis, but emerged with national force only in the mid-1960's. In the early part of the decade air and water pollution began to take on significance as national issues and by 1965 they had become highly visible. The first national public opinion poll on such questions was taken in that year, and the President's annual message in 1965 reflected, for the first time, a full fledged concern for pollution problems. Throughout the rest of the decade and on into the 1970's these issues evolved continually. Federal legislation to stimulate remedial action was shaped over the course of these seven years, from 1965 to 1972, a distinct period which constituted the second phase in the evolution of environmental politics, taking its place alongside the previously developing concern for natural environment areas.

The legislative results were manifold. Air pollution was the subject of new laws in 1967 and 1970; water pollution in 1965, 1970 and 1972.⁴² The evolving concern about pesticides led to revision of the existing law in the Pesticides Act of 1972.⁴³ The growing public interest in natural environment values in the coastal zone, and threats to them by dredging and filling, industrial siting and offshore oil development first made its mark on Congress in 1965 and over the next few years shaped the course of legislation which finally emerged in the Coastal Zone Management Act of 1972. Earth Day in the spring of 1970 lay in the middle of this phase of historical development, both a result of the previous half-decade of activity and concern and a new influence to accelerate action. The outline of these various phases of environmental activity, however, can be observed only by evidence and actions far beyond the events of Earth Day. Such more broad-based evidence identifies the years 1965 to 1972 as a well-defined phase of historical development in terms of issues, emphasizing the reaction against the adverse effects of industrial growth as distinct from the earlier emergence of natural environment issues.

Yet this new phase was shaped heavily by the previous period in that it gave primary emphasis to the harmful impact of pollution on ecological systems rather than on human health - a concern which was to come later. In the years between 1965 and 1972 the interest in "ecology" came to the fore to indicate the intense public interest in potential harm to the natural environment and in protection against disruptive threats. The



impacts of highway construction, electric power plants and industrial siting on wildlife, on aquatic ecosystems and on natural environments in

general played a major role in the evolution of this concern. One of the key elements of evolving public policy was the enhanced role of the U.S. Fish and Wildlife Service in modifying decisions by developmental agencies to reduce their harmful actions.⁴⁴ The effects of pesticides were thought of then in terms of their impact on wildlife and ecological food chains, rather than on human health. The major concern for the adverse effect of nuclear energy generation in the late 1960's involved its potential disruption of aquatic ecosystems from thermal pollution rather than the effect of radiation on people. The rapidly growing ecological concern was an extension of the natural environment interests of the years 1957 to 1965 into the problem of the adverse impacts of industrial growth.^{45, 46, 47}



Beginning in the early 1970's still a third phase of environmental politics arose which brought three other sets of issues into public debate: toxic chemicals, energy and the possibilities of social, economic and political decentralization. These did not obliterate earlier issues, but as some natural environment matters and concern over the adverse effects of industrialization shifted from legislative to administrative politics, and thus became less visible to the general public, these new issues emerged often to dominate the scene. They were influenced heavily by the seemingly endless series of toxic chemical episodes, from PBB's in Michigan to kepone in Virginia to PCB's on the Hudson River, to the discovery of abandoned chemical dumps at Love Canal and near Louisville, Kentucky.⁴⁸ These events, however, were only the more sensational aspects of a more deep-seated new twist in public concern for human health.⁴⁹ Interest in personal health and especially in preventive health action took a major leap forward in the 1970's. It seemed to focus especially on such matters as cancer and environmental pollutants responsible for a variety of health problems, on food and diet on the one hand and exercise on the other. From these interests arose a central concern for toxic threats in the workplace, in the air and water, and in food and personal habits that came to shape some of the overriding issues of the 1970's on the environmental front. It shifted the earlier emphasis on the ecological effects of toxic pollutants to one more on human health effects. Thus, while proceedings against DDT in the late 1960's had emphasized adverse ecological impacts, similar proceedings in the 1970's focused primarily on human health.

The energy crisis of the winter of 1973-74 brought a new issue to the fore. Not that energy matters had gone unnoticed earlier, but their salience had been far more limited. After that winter they became more central. They shaped environmental politics in at least two ways. First, energy problems brought material shortages more forcefully into the realm of substantive environmental concerns and emphasized more strongly the problem of limits which these shortages imposed upon material growth.⁵⁰ The physical shortages of energy sources such as oil in the United States, the impact of shortages on rising prices, the continued emphasis on the need for energy conservation all helped to etch into the experience and thinking of Americans the "limits" to which human appetite for consumption could go. Second, the intense demand for development of new energy sources increased significantly the political influence of developmental advocates in governmental, corporate and technical institutions which had long chafed under both natural environment and pollution control programs. This greatly overweighed the balance of political forces so that environmental leaders had far greater difficulty in being heard. In the face of energy issues environmental leaders formulated

their own energy proposals which they sought to inject into the debates, but not yet with overriding success amid an overwhelming emphasis on traditional approaches to increasing energy supply.

Lifestyle issues also injected a new dimension into environmental affairs during the course of the 1970's.⁵¹ They became especially visible in the energy debates, as the contrast emerged between highly centralized technologies on the one hand, and decentralized systems on the other. Behind these debates lay the evolution of new ideas about organizing one's daily life, one's home, community and leisure activities and even work - all of which had grown out of the changing lifestyles of younger Americans. It placed considerable emphasis on more personal, family and community autonomy in the face of the forces of larger social, economic and political organization. The impact and role of this change was not always clear, but it emerged forcefully in the energy debate as decentralized solar systems and conservation seemed to be appropriate to decisions made personally and locally - on a more human scale - contrasting markedly with high-technology systems which leaders of technical, corporate and governmental institutions seemed to prefer. Issues pertaining to the centralization of political control played an increasing role in environmental politics as the 1970's came to a close.

To define stages in the evolution of environmental affairs in this manner helps to interweave these affairs with broader patterns of social change. One should be wary, perhaps, of the temptation to argue that by 1980 a "full-scale" set of environmental issues had emerged, bit by bit, to form a coherent whole. For there were many different strands which at times went off in different directions. Those whose environmental experience was confined to the urban context did not always share the perspective and interest in issues of those who were preoccupied with the wildlands. Yet it was rather striking the degree to which working relationships had developed amid the varied strands.⁵² What was especially noticeable was the degree to which the challenge posed by the Reagan administration tended to mobilize latent values and strengthen cooperative tendencies.⁵³ From the beginning of that administration, the new governmental leaders made clear their conviction that the "environmental movement" had spent itself, was no longer viable, and could readily be dismissed and ignored. During the campaign the Reagan entourage had refused often to meet with citizen environmental groups, and in late November it made clear that it would not even accept the views of its own "transition team" which was made up of former Republican administration environmentalists who were thought to be far too extreme.⁵⁴ Hence environmentalists of all these varied hues faced a hostile government that was not prone to be evasive or deceptive about that hostility. Its anti-environmental views were expressed with enormous vigor and clarity.

We can well look upon that challenge as an historical experiment which tested the extent and permanence of the changes in social values which lay at the root of environmental interest. By its opposition the Reagan administration could be thought of as challenging citizen environmental activity to prove itself. And the response, in turn, indicated a degree of depth and persistence which makes clear that environmental affairs stem from the extensive and deep-seated changes we have been describing. Most striking perhaps have been the public opinion polls during 1981 pertaining to revision of the Clean Air Act. On two occasions, in April and in September the Harris poll found that some 80% of the American people favor at least maintaining that Act or making it stricter, levels of positive environmental opinion on air quality higher than for polls in the 1960's or 1970's.⁵⁵ One can also cite the rapid

increases in membership which have occurred in many environmental organizations, most notably the Sierra Club, as well as financial contributions to them.⁵⁶ And the initial forays into electoral politics which environmentalists have recently undertaken seems to have tapped activist predispositions mobilized by the fear of the new administration.⁵⁷

We might take this response to the Reagan administration challenge, therefore, as evidence of the degree to which we can assess the environmental activities of the past three decades as associated with fundamental and persistent change, not a temporary display of sentiment, which causes environmental values to be injected into public affairs continuously and even more vigorously in the face of political adversity. The most striking aspect of this for the historian lies in the way in which it identifies more sharply the social roots of environmental values, perception and action. Something is there, in a broad segment of the American people which shapes the course of public policy in these decades after World War II that was far different from the case earlier. One observes not rise and fall, but persistent evolution, changes rooted in personal circumstance which added up to broad social changes out of which "movements" and political action arise and are sustained.⁵⁸ Environmental affairs take on meaning as integral parts of a "new society" that is an integral element of the advanced consumer and industrial order of the last half of the 20th century.

The Environmental Economy and Environmental Ideology

There remain two larger modes of analysis which help to define the historical role of environmental affairs - one economic and the other ideological. In neither case can one associate environmental politics with either the pre-World War II economy or its ideology. In both cases we must look to innovations rooted in post-War changes.⁵⁹

Environmental impulses served as a major influence in shaping the newer, more "modern," economy. They brought to the fore new demand factors which in turn generated new types of production to fill them; they placed increasing pressure on greater technological efficiency in production to reduce harmful residuals and resource waste. In many aspects of the economy one can distinguish between older and newer forms of demand and supply, institutions and modes of economic analysis. The transition represents a shift from the older manufacturing to the newer advanced consumer economy. In this transition environmental influences were an integral part of the emerging economy that was struggling for a larger role in America amid more established economic institutions. From this context of analysis we can establish further elements of the role of environmental affairs in long-run social change.

In public debate there was a tendency to set off the "economy" versus the "environment" - as if the latter constituted a restraint on the former.⁶⁰ But environmental affairs were a part of the economy, that part which constituted new types of consumer demand, giving rise in turn to new modes of production to supply that demand, some in the private market and some in the public. The ensuing controversies were between older and newer types of demand, and the allocation of resources as between older and newer types of production as patterns of demand changed. It was difficult for the older manufacturing economy, with its emphasis on consumer necessities and conveniences and physical commodities to fill them, to accept the legitimacy of the newer economy which gave rise to newer consumer needs and types of production.⁶¹ The tension between old and new was reminiscent of the similar tension in the 19th century between the older agricultural and the newer manufacturing economies.

Much of the American economy had moved beyond necessities and conveniences to encompass amenities. It is difficult to identify this change if one begins the analysis with the traditional focus on modes of production; it is more easily identified if one starts with changing patterns of consumption. The former approach lumps together many and varied changes as one "service economy," that beyond raw material extraction and manufacturing. The latter identifies varied new sectors associated with consumption such as the "recreation economy," the "leisure economy," "the health economy," the "creative arts economy," and the "environmental economy" each of which identifies a new direction of economic change. Much of this involves discretionary income, the allocation of expenditures not just to amenities but also to reshaped and restyled necessities and conveniences themselves to make them aesthetically more appealing, to add to them elements other than traditional characteristics of "utility."

The most serious question of resource allocation raised by the environmental economy lay in the appropriate balance which should be struck between natural and developed environments. The new environmental consumer society called for more of the former. This gave rise to massive debates over such issues as wilderness and other natural environment proposals. It was difficult, if not impossible, for those associated with the older developmental economy to accept the notion that natural environments should play a major role in modern economic affairs. Hence they tended to argue that in this matter a proper "balance" should involve only minimal allocation of air, land and water to natural environments. Often they maintained that such allocations should end. They might approve some role for natural environments in the modern economy but only if they were on sites which developers themselves did not want.⁶² Hence, mining companies argued that wherever minerals were to be found they should be developed irrespective of their implication for the degradation of natural environments.

The environmental impulse also had major implications for the technology of production, serving as a force toward more rapid modernization of plant and equipment.⁶³ In any given segment of industry plants constituted a variable spectrum ranging from the most obsolete to the most modern. In the normal course of private market choices the more obsolete were discarded and the more modern added, giving rise to a general tendency for the entire industry toward modernization. But environmentalists felt that the pace of change was too slow. They were especially interested in the environmental efficiency of production, the degree to which it reduced the output of residuals per factor input; they believed that plants which were more obsolete in material product output were also more obsolete in environmental output. Hence they urged that the most modern plants, the "average of the best," should serve as examples against which the rest of the industry should be judged. In focusing on these "best technologies" as models for achievement by all, environmentalists served as a force for technological innovation.⁶⁴

It was often difficult, however, for industry to move at the pace which environmentalists desired. Many corporate leaders were from sales and marketing origins, rather than engineering and production, and tended not to press continually for cost-reducing technologies but to maintain cost-increasing ones so long as they were profitable.⁶⁵ At the same time the corporate response to regulatory requirements often led to superficial changes to reduce the immediate burden of governmental decisions, such as legal action or limited "add on" pollution control technology, rather than to re-examine production technologies in order to seek combined efficiencies in both product and environmental output.⁶⁶ Those who took a leading role in that direction, such as Joseph Ling of the 3-M

corporation were often thought of as "eccentrics," by their fellow executives. The internal politics of trade associations which spoke for business in the larger political scene often required that their public positions not be too "advanced," since their members included both the more obsolete and the more modern firms; in water pollution control, for example, they argued, that the median firm rather than the most efficient ten percent should serve as the model for the rest of the industry to follow. Corporate leaders often argued that regulation was a roadblock to greater production efficiencies, but when such a proposition was subjected to empirical examination it was found, on the contrary, that if regulation was sufficiently firm it gave rise to more serious examination of manufacturing processes and resulted in innovation.

We might also profitably identify the environmental impulse more precisely in terms of its ideological component. What is the place of environmental ideas amid the political ideologies inherited from the recent past? These customarily divide political forces between the "liberal" and the "conservative." The corporate business community and critics of growth in government are thought of as "conservatives," while more subordinate sectors of society who look to government to aid them are thought of as "liberal." While these ideological patterns have roots deeper in history than the 1930's, they were given a new twist during the New Deal when controversies over public spending for social programs such as welfare and social security were added to those of earlier vintage which involved disputes among business, labor and agriculture over the distribution of the fruits of production.

Environmental issues and environmental ideas are difficult to classify in this way. If one raised the question as to whether or not environmentalists favored public or private enterprise in principle, one would have to observe that while they called for greater governmental initiatives in behalf of their objectives such as in public land management or environmental controls on private production, they were as skeptical of public as they were of private enterprise. The Tennessee Valley Authority, the major example of public ownership of the means of industrial production in recent times was roundly condemned when its actions with respect to air pollution, dam building and coal and uranium mining were environmentally detrimental and was applauded when it took up innovative energy measures during the Carter administration.⁶⁷ Was it associated with ideological traditions sustained by the politics of the industrial working class? Certainly not with socialist ideologies and with more reformist movements only partially. For while worker movements grew out of the struggle among producers for varied shares of the profits of production, environmental values were associated more with consumption which tended to draw lines of demarcation between environmentalists and producers as a whole. Only when it came to environmental health, which brought occupational and community health concerns together, did workers and environmentalists find common ground.⁶⁸

Environmental values and ideas tended not to fit into traditional political ideologies, but to cut across them.⁶⁹ They tended to define corporate leaders as radicals, as responsible for massive, rapid and deep-seated transformations in modern society that threatened to destroy prized natural environments, that uprooted stable ways of life, and generated pervasive and persistent chemical threats. Corporate leaders were ever demanding that people change their lives markedly in order to accommodate developmental objectives, and to accept the risks of their proposals for rapid and far-reaching change. In response to these demands, environmentalists sought to slow up the pace of innovation, to restrain it. Hence they were conservative. It would not be accurate to describe them

as one industry leader did as "stone-age neanderthals," for environmentalists shared, with approval, the material benefits of modern production. But they were willing to argue that the pace of change in America in the 1960's and 1970's was far too rapid and should be slowed down so as not to destroy values important to a society of modern patterns of life.⁷⁰

They were also often fiscal conservatives when the use of public funds was an important instrument of material development and engaged in many a political struggle to cut back public spending. The 1960's and 1970's were decades of rapid economic "growth" in which jobs and product increased dramatically and public programs with public funding played a major role in it: construction of dams and highways, rebuilding on flood plains after floods, channelization of streams and rivers, development of barrier islands, a host of "rural development" programs which had become extended from the "depressed" area of the Appalachians to the entire nation.⁷¹ All these tended to encourage more rapid economic development. The most widely known cases of environmental action on this score pertained to funds for construction of public works in rivers and harbors under the auspices of the U.S. Army Corps of Engineers.⁷² It was no wonder that in fashioning coalitions to scale back such expenditures environmentalists joined with the National Taxpayers Union and other "fiscal conservatives" in Congress who tended to give ideological support to reduced public spending.

At the same time, in social values environmentalists could be thought of as innovative rather than conservative. Their views about natural environments and human health were associated with newer rather than older ideas about human wants and needs; they had a larger association with other innovations in values such as the more autonomous role of women, more cosmopolitan rather than traditional ways of life, and "freer" ways of thinking that were associated with social modernization. Such value changes had taken place at a number of times in the nation's past and these historians understand by sorting out newer values from older, distinguishing those people who espoused the newer with enthusiasm from those who drew back in defense and fear against cultural change. In the mid-19th century, for example, the Republican party had been associated with innovations in cultural values and the Democratic party with a defense of older ones. But in the mid-20th century, the party roles were reversed, as the Democrats seemed to harbor cultural innovation and the Republicans spoke out in defense of older values. These patterns of cultural change tended to define what was "conservative" and what was "liberal" in terms different from the issues of economic controversy. And so it was with environmental values in which environmentalists both expressed the defense of daily life from technological radicalism and espoused innovations in cultural values.⁷³

Within the context of these more "modern" and more innovative values, however, there was in environmental affairs a deeply conservative streak in a different sense that went far beyond the role of corporations and their defense to the larger ideology of conservatism - a search for wider human meaning. Environmentalists tended to work out their values amid a "sense of place" that provided roots to life's meaning much in the same way as "local" community values long had displayed. It was their involvement with the natural environments of given places that had engaged emotions and minds. It was the threat to that "place" of home, work and play from large-scale developments, from air and water pollution, and from toxic chemical contamination which aroused them to action. Environmentalists sought roots in the less developed and more natural world, and rapid change threatened those roots with impairment and destruction. Insofar as one could describe conservatism as more generally a search for

roots, for stability and order amid the larger world of rapid change, then environmentalists shared that impulse.⁷⁴

Summary

This article has constituted an attempt to place the environmental affairs of the past three decades in the perspective of historical evolution. I have sought not just to search for antecedents which would serve to link the more recent and the more remote pasts through some similarity of human activity. Instead I have sought to determine the degree to which a relatively full range of characteristics of environmental affairs, from values to political controversy to economic change and political ideology constitute merely an elaboration of earlier tendencies or something that was relatively new, a departure from the past. I have argued that these cannot be understood adequately unless they are associated with the newer society, the newer economy and the newer politics of the decades after World War II. Moreover, they can be understood only as an evolving phenomenon within those post-War decades, amid the patterns of change in the advanced consumer society as it steadily took shape. American society today is far different than it was in the 1930's. It can best be understood not as an implication of the New Deal years, but as a product of vast social and economic transformations which took place after World War II which brought many new values and impulses to the American political scene. And so it is with environmental affairs. While displaying some roots in earlier times they were shaped primarily by the rapidly changing society which came into being after the War which, in so many ways, constitutes a watershed in American history. ER

ENDNOTES

¹For this theme see Samuel P. Hays, *Conservation and the Gospel of Efficiency* (Cambridge, 1958).

²A somewhat larger ecological context for analysis of the soil conservation movement is Donald Worster, *Nature's Economy* (San Francisco, 1977), pp. 189-253.

³For the Taylor Grazing Act and its implementation see Phillip O. Foss, *Politics and Grass; The Administration of Grazing on the Public Domain* (Seattle, 1960); Marian Clawson, *The Bureau of Land Management* (New York, 1971); William Voigt, Jr., *Public Grazing Lands: Use and Misuse by Industry and Government* (New Brunswick, N.J., 1976).

⁴See, especially, James B. Trefethen, *An American Crusade for Wildlife* (New York, 1975), esp. pp. 243-255.

⁵The University of Michigan School of Forestry, for example, became the School of Natural Resources when Samuel Dana succeeded Flibert Roth, a protege of Gifford Pinchot, as Dean. One of Dana's major innovations was to bring wildlife more fully into the curriculum. Interview with Carl Holcomb, student at the School in the early 1930's and editor of its student magazine, *Michigan Forests*, in 1934.

⁶*Forests and Waters* was one of the titles of the magazine published by the American Forestry Association (now American Forests) in the early 20th century. It was also the name of the administering agency for

Pennsylvania resources, the Department of Forests and Waters until 1970 when it was changed to the Department of Environmental Resources.

⁷The National Parks Association added this new title to its publication in 1970. At the same time it revised its own name from National Parks Association to National Parks and Conservation Association.

⁸A brief statement of this competition between the Park Service and the Forest Service, and a detailed analysis of the Olympic case is Ben W. Twaight, "The Tenacity of Value Commitment: The Forest Service and the Olympic National Park," PhD thesis, University of Washington, Seattle, 1971.

⁹See, for example, Ralph Borsodi, *Flight from the City: An Experiment in Creative Living on the Land* (New York and London, 1933), and a publication, edited by Mildred Loomis, which grew out of Borsodi's inspiration, *The Green Revolution, 1962-*, published in the 1960's at the School of Living, Freeland, Maryland.

¹⁰For a brief description of this social context see Samuel P. Hays, "The Structure of Environmental Politics Since World War II," in *Journal of Social History*, 14-4 (Summer, 1981), 719-738.

¹¹See William Ashworth, Hells Canyon, *The Deepest Gorge on Earth* (New York, 1977); interview with Brock Evans (May 1980) who at the time of the Hells Canyon decision was Pacific Northwest representative of the Sierra Club.

¹²These developments are worked out more fully in Samuel P. Hays, "The Role of Forests in American History," paper presented at a conference on the Future of the American Forests, sponsored by the Conservation Foundation, Seattle, Washington, April 1979. See also Hays, "Gifford Pinchot and the American Conservation Movement," in Carroll W. Purcell, Jr., ed., *Technology in America: A History of Individuals and Ideas* (Cambridge, 1981), 151-162.

¹³This analysis of the relationship between the U.S. Forest Service and the wilderness movement is drawn from a variety of sources, including Twaight (fn. 8); James Gilligan, "The Development of Policy and Administration of Forest Service Primitive and Wilderness Areas in the Western United States" (2v), PhD thesis, University of Michigan, 1953; articles in *The Living Wilderness* and the *Sierra Bulletin* from the mid-1930's onward; accounts of wilderness politics in state publications such as "Wild Oregon," "Wild Washington," "The Wilderness Record" (California); and the Sierra Club National News Report.

¹⁴For accounts of these divergent views see articles in *Forest Planning*, Forest Planning Clearinghouse, Eugene, Oregon, which began publication in April 1980.

¹⁵For a continuing treatment of issues arising from this program see the annual *Proceedings of the National Watershed Congress*, first held in 1953 and annually thereafter.

¹⁶The issues in stream channelization can be followed in Committee on Government Operations, U.S. House of Representatives, *Stream Channelization* (4 parts), 92nd Congress, 1st Session (Washington, D.C., 1971).

¹⁷For a survey of non-game wildlife issues, see Wildlife Management Institute, "Current Investments, Projected Needs & Potential New Sources

of Income for Nongame Fish & Wildlife Programs in the United States," (Washington, D.C., 1975).

¹⁸Wildlife Management Institute, "The North American Wildlife Policy, 1973," which includes a copy of the "American Game Policy, 1930." (Washington, D.C., nd).

¹⁹For two recent compilations of value changes over the past several decades see Joseph Veroff, Elizabeth Douvan and Richard A. Kulka, *The Inner American: A Self-Portrait From 1957 to 1976* (New York, 1981); Daniel Yankelovich, *New Rules: Searching for Self-Fulfillment in a World Turned Upside Down* (New York, 1981).

²⁰See Arnold Mitchell, "Social Change: Implications of Trends in Values and Lifestyles," VALS Report No. 3, Stanford Research International, Menlo Park, 1979; and John Naisbitt, "The New Economic and Political Order of the 1980's," speech given to The Foresight Group, Stockholm Sweden, Apr. 17, 1980, available from the Center for Policy Process, Washington D.C. For periodic coverage of work on value changes consult *Leading Edge Bulletin: Frontiers of Social Transformation*, published by Interface Press, Los Angeles, Calif.

²¹See, for example, Mary Keys Watson, "Behavioral and Environmental Aspects of Recreational Land Sales," PhD thesis, Department of Geography, Pennsylvania State University, 1975.

²²A considerable number of public opinion polls by the Gallup, Harris and Roper organizations indicate the range of expression of environmental values. There are also numerous polls on specialized environmental subjects which reflect environmental values. Among them are: Stephen R. Kellert, "American attitudes, knowledge and behaviors toward wildlife and natural habitats," study funded by the U.S. Fish and Wildlife Service, of which three of four phases were completed as of the end of 1980. The titles of each of phases I, II and III were: "Public Attitudes Toward Critical Wildlife and Natural Habitat Issues," "Activity of the American Public Relating to Animals," and "Knowledge, Affection and Basic Attitudes Toward Animals in American Society." See also the Gallup Organization, "National Opinions Concerning the California Desert Conservation Area," study conducted for the Bureau of Land Management (Princeton, 1978); and Opinion Research Corporation, "The Public's Participation in Outdoor Activities and Attitudes Toward National Wilderness Areas," prepared for the American Forest Institute (Princeton, 1977).

²³This sectional analysis is derived from tabulation of environmental votes in the U.S. House of Representatives, 1970-77, originally prepared by the League of Conservation Voters, Washington, D.C. for each congressional session.

²⁴One type of evidence which reflects these growing interests is the "field guide," which grew rapidly in extent and circulation in the 1960's and 1970's. The most traditional format was that represented by the Peterson guide series which identified birds, plants and animals. But there were an increasing number of hiking guides which included considerable information about the natural environment through which one hiked. Often each new site around which public natural environment interest arose led to a guide which enabled people to "find their way" and to appreciate what they saw. In 1980 the Sierra Club began to publish a new series of regional "naturalist guides" which provided similar assistance to seeking out a wide range of natural environmental areas.

25 One of the major expressions of this interest was nature photography. This cannot be pinned down quantitatively, but not wholly irrelevant was the rise in photography as a whole in American society. The 1980 edition of the survey of American participation in the arts indicated that the number of Americans engaged in photographic pursuits rose from 19% in 1970 to 44% in 1980. Westerners tended to be more active (56% participation in 1980) than those in other parts of the country. See American Council for the Arts, *Americans and the Arts* (New York, 1981), p. 37.

26 Two documents which reflect this emphasis at a governmental level are U.S. Senate, Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States* (Washington, GPO, 1977); and U.S. Department of Health Education and Welfare, Public Health Service, *Healthy People; the Surgeon General's Report on Health Promotion and Disease Prevention* (Washington, GPO, 1979). See also, as a representative more popular statement, *Environmental Science and Technology*, Apr. 1970, 275-277, interview with Dr. Paul Kotin, director, National Institute for Environmental Health Sciences, including the statement, "Now people are interested not merely in not being very sick but in being very well."

27 The economic role of the health food industry can be followed in its trade publication, *Whole Foods*, published in Santa Ana, California, beginning in January 1978. For data on the level of business see "First Annual Report on the Industry," in *Whole Foods: Natural Food Guide* (And/Or Press, Berkeley, California, 1979), 268-274.

28 In late 1981 a new magazine, *American Health*, was announced, subtitled "Fitness of Body and Mind." The initial direct-mail test to establish the existence of potential readers brought a 7.2% response when 5% is considered to be very good. The initial subscription offer will go to readers of a variety of publications, such as *Runners' World*, *Psychology Today* and other science, health, class, food and self-help magazines, which, taken as a whole, reflect the varied dimensions of the value changes associated with new attitudes toward health. *New York Times*, Nov. 23, 1981.

29 Some of these issues have now become "classic," the subject of book-length writing. See, for example, Allan R. Talbot, *Power Along the Hudson; The Storm King Case and the Birth of Environmentalism* (New York, 1972); Barry M. Casper and Paul David Wellstone, *Powerline; The First Battle of America's Energy War* (Amherst, Mass., 1981); Joyce Egginton, *The Poisoning of Michigan* (New York, 1980); Paul Brodeur, *Expendable Americans* (New York, 1973).

30 For an analysis in this vein see William E. Shands and Robert G. Healy, *The Lands Nobody Wanted* (The Conservation Foundation, Washington, D.C., 1977).

31 A classic expression of the environmental view in this debate is Amory B. Lovins, *Soft Energy Paths; Toward a Durable Peace* (Cambridge, Mass., 1977). An analysis of the values implicit in these contrasting positions is included in Avarham Shama and Ken Jacobs, *Social Values and Solar Energy Policy; The Policy Makers and the Advocates*, Solar Energy Research Institute, Oct. 1979, SERI-RR-51-329.

32 See, for example, Susan Jay Kleinberg, "Technology's Step-Daughters; the Impact of Industrialization Upon Working Class Women, Pittsburgh, 1865-1890." University of Pittsburgh, PhD thesis, 1973.

33 The most celebrated book in this debate was Donella H. Meadows and

Dennis I. Meadows, *The Limits to Growth* (New York, 1972). See also a reply by H. S. D. Cole, et al (eds), *Models of Doom; A Critique of the Limits to Growth* (New York, 1973). For one important item in the energy debate see Robert Stobaugh and Daniel Yergin, *Energy Futures* (New York, 1979).

34 See Roger W. Sant, et al, *Eight Great Energy Myths; the Least-Cost Energy Strategy - 1978-2000*, Energy Productivity Report No. 4, The Energy Productivity Center, Mellon Institute, Arlington, Va., 1981.

35 See items in fn 29; see also Hays, "The Structure of Environmental Politics Since World War II," fn 10.

36 See, for example, Craig R. Humphrey and Frederick R. Buttel, *Environment, Energy and Society* (Belmont, Calif., 1982), which describes Rachel Carson as an "important catalyst for the environmental movement" and the Santa Barbara oil spill as a "pivotal event." (pp. 7 and 122). This book, the most comprehensive account yet from the perspective of "environmental sociology" gives heavy emphasis to the campus student movement of 1969-1970 as the source of environmental concern.

37 The Sierra Club, for example, grew from 7000 in 1952 to 70,000 in 1969, and the Wilderness Society from 12,000 in 1960 to 54,063 in 1970.

38 The relative significance of widely-shared social and economic changes on the one hand, and dramatic events on the other is a major set of alternatives in many historical analyses. The environmental scene is an especially striking case of the way in which preoccupation with the more publicized events has obscured the more fundamental changes.

39 For hearings leading up to the appointment of the NORRRC see United States Senate, Committee on Interior and Insular Affairs, 85th Congress, 1st Session, Hearing, "Outdoor Recreation Resources Commission," May 15, 1957 (Washington, GPO, 1957). See accounts of the outdoor recreation situation, which reflect varied responses to it, in *American Forests*, Dec. 1960, pp. 58-59, and Nov. 1961, pp. 40-41 and 55-56; and in *Living Wilderness* in issues through 1959 to 1962, for example, Winter-Spring, 1962, pp. 3-9.

40 For the American Wilderness Alliance see its publications, *Wild America* (1979-present) and "On the Wild Side" (1979-present). See also *Proceedings, 1980 Western Wilderness and Rivers Conference*, Denver, Colorado, Nov. 21-22, 1980, distributed and apparently published by the Alliance.

41 The work of the Nature Conservancy can best be followed in its quarterly publication, *Nature Conservancy News* (Arlington, Va.), which began publication in 1951.

42 For items on the air quality issue see John C. Esposito, *Vanishing Air* (New York, 1970) and Richard J. Tobin, *The Social Gamble* (Lexington, Mass., 1979). On water quality see David Zwick and Marcy Benstock, *Water Wasteland* (New York, 1971) and Harvey Lieber, *Federalism and Clean Waters* (Lexington, Mass., 1975).

43 The pesticide controversy has produced several "tracts for the times", among them Frank Graham, Jr., *Silent Spring* (Boston 1970); Rita Gray Beatty, *The DDT Myth; Triumph of the Amateurs* (New York 1973); Georg Claus and Karen Bolander, *Ecological Sanity* (New York 1977); and Robert van den Bosch, *The Pesticide Conspiracy* (New York 1978).

and *The Next Whole Earth Catalog* (1980). The spirit of personal autonomy is expressed by a statement introducing the 1980 edition: "So far remotely done power and glory - as via government, big business, formal education, church - has succeeded to the point where gross defects obscure actual gains. In response to this dilemma and to these gains a realm of intimate, personal power is developing - the power of individuals to conduct their own education, find their own inspiration, shape their own environment, and share the adventure with whoever is interested. Tools that aid this process are sought and promoted by *The Next Whole Earth Catalog*." (p.2). See also *Mother Earth News*, (fn. 9) for a view of the range of facets in this perspective.

52 On many and varied occasions there were expressions of cooperation and joint action. The most extensive occurred in 1981 when the Global Tomorrow Coalition was formed, by the end of the year comprising 53 environmental organizations, most of them formed during the environmental era. See its publication, *Interaction* (Washington, D.C.), the first issue of which appeared November/December 1981.

53 See a varied set of newspaper clippings and articles, author file; also interviews with national leaders of the Sierra Club and the National Parks and Conservation Association concerning their varied efforts to maintain working liaison with Secretary of the Interior James Watt.

54 See report, "Protecting the Environment: A Statement of Philosophy," drawn up by the 14-member Task Force on the Environment, co-chaired by Dan W. Lufkin and Henry L. Diamond; see also accounts of the Task Force, list of its members and a summary of its report in *Environment Reporter*, Oct. 17, 1980, p. 812, and Jan. 30, 1981, pp. 1855-1856. The Task Force report was rejected and its personnel replaced as lead administration advisers on environmental affairs by another group, quite divorced from earlier environmental activity, headed by Norman Livermore, a former administrator in California during the governorship of Ronald Reagan. See *Environment Reporter*, Jan. 12, 1980, p. 1226. For a brief account of this transition in advisers see *Wilderness Report*, Dec. 1980.

55 See *The Harris Survey*, "Substantial Majorities Indicate Support for Clean Air and Clean Water Acts," June 11, 1981, in the form of a news release.

56 From Oct. 1, 1980 to Oct. 1, 1981 Sierra Club membership increased by 35%, and in October 1981 went over the 250,000 mark. Organizations less politically oriented grew in both membership and financial contributions, but less rapidly.

57 See *Washington Post*, Nov. 15, 1981, Section L-1 for a brief account of the "green vote" in the 1981 elections; see also clippings (author file) from *New Jersey newspapers concerning participation in electoral politics* there during the summer primaries.

58 This conclusion differs markedly from the views of environmental sociologists; see, for example, Humphrey and Buttel, *op. cit.*, 123-127, who speak of "rise and fall" rather than "persistent evolution" of environmental affairs. Their analysis seems to rest not on an examination of environmental values as social and political phenomena, but on their judgement as to the balance of political forces involved in a few selected "environmental problems."

59 The following analysis is rarely made explicit in contemporary writings, but rests more on my own judgment about tendencies and implica-

44 For the early stages of this issue see Committee on Merchant Marine and Fisheries, Subcommittee on Fisheries and Wildlife Conservation, 89th Congress, 2nd Session, Hearing, "Estuarine and Wetlands Legislation," June 16, 22-23, 1966. One can follow the issue as it developed leading up to the Coastal Zone Management Act of 1972. That Act was an important example of how a major environmental thrust, a proposal for a system of national estuarine areas to be managed by the National Park Service, much akin to the newly emerging concept of seashores and lakeshores, was almost completely turned back. It appeared in the 1972 Act in the very limited form of "estuarine research areas."

45 One of the most significant backgrounds to the 1969 National Environmental Policy Act lay in the concern of the Fish and Wildlife Service about the failure of federal agencies to consider the impacts of development on fish and wildlife habitat, and especially their failure to "consult" with the agency under the Fish and Wildlife Coordination Act. One such issue was the dredge and fill practices of the U.S. Army Corps of Engineers who refused to consider "impacts" other than those on the maintenance of navigation channels. To rectify this problem, Rep. John Dingell of Michigan included in a proposed estuarine area act a section which would require the Fish and Wildlife Service to approve each permit granted by the Corps. See Committee on Merchant Marine and Fisheries, Subcommittee on Fisheries and Wildlife Conservation, 90th Congress, 1st Session, Hearing, "Estuarine Areas," (Washington, GOP, 1967); see especially testimony of Alfred B. Fitt, U.S. Army Corps of Engineers, pp. 119-207.

46 One of the major thrusts leading up to NEPA took place in the Subcommittee on Fisheries and Wildlife under the leadership of Rep. Dingell. See his hearing, "Environmental Quality," 91st Congress, 1st Session, on HR 6750, a bill designed to amend the Fish and Wildlife Coordination Act (Washington, GOP, 1969).

47 It should be emphasized that in its origins NEPA was an inter-agency review and not a public review process. It constituted a far more diluted response to the problem of inter-agency review than did the Dingell proposal for a "Veto" or "dual permit" procedure, since it gave agencies the authority only to comment and not to veto the actions of other agencies. Only under modifications by the Nixon administration and the courts did NEPA become an instrument of public review.

48 Toxic chemical cases were numerous and have generated a considerable amount of writing. See, for example, Ralph Nader, Ronald Brownstein and John Richard, eds., *Who's Poisoning America; Corporate Polluters and Their Victims in the Chemical Age* (San Francisco, 1981); Michael H. Brown, *Laying Waste; the Poisoning of America by Toxic Chemicals* (New York, 1979).

49 For some more recent events in these affairs see "Exposure," news-letter published by the Environmental Action Foundation (Washington, D.C.), Feb. 1980; and "The Waste Paper," published by the Sierra Club, Spring 1980- (Buffalo, New York).

50 A brief, concise statement of environmental energy perspectives is in Gerald O. Barney, ed., *The Unfinished Agenda* (New York, 1977), pp. 50-68. The most eloquent speaker for the environmental energy view was Amory Lovins (fn. 31).

51 A source which provides one of the most comprehensive views of this concern is the series of "whole earth" catalog publications. These include Stewart Brand (ed), *The Whole Earth Catalog* (Menlo Park, Calif., 1968); *The Last Whole Earth Catalog* (1971); *The Whole Earth Epilog* (1974),

tions inherent in environmental activity.

60A recent non-ideological analysis which assumes this approach is Jerry A. Kurtzweg and Christina Nelson Griffin, "Economic Development and Air Quality: Complementary Goals for Local Governments," in *Journal of the Air Pollution Control Association*, 31-11, Nov. 1981, pp. 1155-1162.

61Perhaps it is not coincidental that the environmental movement was distinctively weak, compared with regional levels of education and urbanization, in the old "factory belt" of the North - as measured by votes in the U.S. House of Representatives on environmental issues, and as concluded from an analysis of environmental affairs within those states.

62Hence, support from the corporate business community for "natural areas" programs, for example on the part of the Nature Conservancy, but opposition to wilderness which involved larger tracts of land on which conflicts with development were far more likely to occur.

63The close relationship between production efficiency and environmental efficiency is described in Michael G. Royston, *Pollution Prevention Pays* (Pergamon Press, New York, 1979).

64This setting for innovation was defined especially in the water quality program in which "technology standards" were adopted in the 1972 Clean Water Act and in which as a result the Environmental Protection Agency was required to analyze existing technologies to decide which was "the average of the best."

65For a view on one aspect of this problem see Hyman G. Rickover, "Getting the Job Done Right," *New York Times*, Nov. 25, 1981, op. ed. page.

66Nicholas A. Ashford and George R. Heaton, "The Effects of Health and Environmental Regulation on Technological Change in the Chemical Industry: Theory and Evidence," in Christopher T. Hill (ed), *Federal Regulation and Chemical Innovation* (American Chemical Society, Washington, D.C., 1979), 45-66.

67The classic case with respect to TVA was the controversy over the construction of Tellico Dam in the Little Tennessee River. But this was only one of many such issues. These can be followed in the monthly newsletter of the Tennessee Citizens for Wilderness Planning.

68The "OSHA/Environment Network" organized to defend both occupational and community environmental protection programs during the early years of the Reagan administration extended earlier more informal cooperation into a more formal organization. See author clipping file, and miscellaneous documents on activities of the Network during 1981 (author file).

69This is reflected in party and ideological analyses of environmental support. See "The public speaks again: A new environmental survey," *Resources, Resources for the Future*, Washington, D.C., No. 60, Sept.-Nov. 1978.

70This view seems to be implicit in a wide range of environmental issues, especially in the nation's countryside and wildlands.

71See the activities of the Environmental Policy Center, Washington, D.C., with respect to appropriations for the construction of dams; this was led throughout the 1970's by Brent Blackweider of the Center. See



also "Alternative Budget Proposals for the Environment, Fiscal Years 1981 & 1982," drawn up by 9 national environmental organizations to suggest ways in which the Reagan administration could reduce federal expenditures.