

BLACK ROCK FOREST PAPERS

THE PRICE OF OPEN SPACE — THE NEED FOR RESEARCH

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The cause of conservation is loud in the land. Natural beauty has been endorsed by the White House. Conservationists have blocked the construction of a new international airport for the New York metropolitan region, and have delayed construction of an important facility planned by the local power company. The Regional Plan Association has projected population growth and the resultant disappearance of open land in the area of which New York City is the focus.¹ New York and New Jersey have taken action as states to secure additional park land while they can. Richard Pough has organized an Open Space Action Committee to inventory existing tracts of twenty acres or more, and to inform their owners of steps they can take to preserve the amenities of their holdings.² Bankers in the region have given way to developers in social disesteem; the bulldozer has taken the place of the mortgage.

There is wide agreement that something must be done to save wild land, or at least open space, for people to use. There is very little information on just what it is that people get from this type of resource, which people get what satisfactions, how many of each kind of person there are in the region, how badly each kind of person wants these satisfactions, what are the costs in preserving or in providing more of them, how these costs should be divided, and finally, how these values will change in the future.

Every one of these questions can be attacked by standard methods of social inquiry. Until we get some hard data to use, policies will necessarily be based upon the relative strengths of the special interests involved. We need something more than a mechanical resultant of political pressures if we are to protect the public interest in a matter as costly as diverting real estate from the uses to which it normally would be put. Once diverted, such land will remain largely useless unless additional investments are made in development and maintenance. Manipulating use of land in a metropolitan area can be expensive business. Saddest of all; some of the most important uses of open land may be so diffuse, or so special, that they will have no organized advocates with political power sufficient to keep an oar in the water.

Most research involves counting things. But this is easy; the hard part is deciding what to count. In the following, I intend to suggest some of the uses open land has for people. I hope that some competent scholar will pick up this theme, refine and correct the analysis, and provide nice units for survey researchers to play with. Then finally we will have some data.

I see open land as important to people for education, and for recreation. I shall discuss education first.

1. Regional Plan Association, The Race for Open Space. New York: Regional Plan Association, 1960

2. Open Space Action Committee, Stewardship. New York: Open Space Action Committee, 1965.

Many of us have learned in the outdoors. Perhaps we have forgotten how much we learned there; perhaps the memory lingers hidden in our inarticulate affection for countryside. What we learned was something more than the material of any course in school or college. We didn't study subjects; we learned as whole individuals.

Outdoor learning takes place in what Omar Moore would call a totally unresponsive environment.³ The countryside is just there; rocks lie around; trees grow where they choose; birds and squirrels conduct their individual pursuits of happiness with magnificent unconcern for those even who "love" them.

I think that we learn first with our feet, in the outdoors. We walk about unguided by pavements, step over fallen trees, jump rivulets, climb, detour obstacles, and stop at every point of interest. The total we see is quite disinterested in us; everything would be the same if we exist or not; life goes on, and will go on after we have gone.

In the outdoors, we learn also with our hands. We need them to assist us in getting around: through underbrush, up onto rocks, around trees leaning out to block our way. We use our hands to get the feel of anything that catches our interest: a flower, a spray from a shrub, a hole in the snow, the pellet of a fox or an owl. We learn the spring in the stem of the young ash, and its lack in the sumac. Life can depend on such knowledge, in some of the walks within sight of New York City. One must know intuitively what to grab when a foot slips in scrambling up one of our rather unimpressive cliffs. Thus we learn also the sure feel of granite, and the crumbly surface of so many of the sedimentaries. We gladly put our hands into the dirt to scabble out an interesting rock, or to dislodge a seedling for a windowsill pot. The word "dirt" itself has a positive meaning, as it has for any gardener. We use our hands unthinkingly, creatively, to learn and in learning to partake of the pleasures of the outdoors. I suggest that one value - one pleasure - of the outdoors is just that we can learn there. Further, I suggest that "love of nature" is associated with peoples who freely use their hands, and particularly with those peoples who are accustomed to using their hands in the learning process.

Jerome Bruner tells us in The Process of Education⁴ that all children go through three stages in learning. First, up to about six years, is the stage of preoperational learning. Here the world is manipulated through action, learning is through trial and error, and simple symbols can be understood. Roughly from six to fourteen, the child goes through the stage of concrete operations. Now children can work out problems logically, in their heads. They can understand the principle of reversibility. But even though children at this age can grasp very complex matters intuitively, this must be in terms of concrete operations the child himself has performed. The final stage is ability to handle formal operations: the ability to think through propositions that are purely hypothetical, no longer limited to matters present, or within the individual's range of experience.

Youngsters at the age of concrete operations can benefit most directly from experience in the outdoors, it seem to me. This is the age when kids explore the limits of their domain, build tree-houses and secret hideaways, clamor for overnight hikes, and generally establish their individual physical superiority over every element of their

3. Personal communication. Omar K. Moore is Professor of Psychology, University of Pittsburgh, and Director of the Responsive Environments Laboratory.

4. Jerome Bruner, The Process of Education, Cambridge: Harvard University Press, 1961.

immediate environment. In the country, this is the age of learning one's own powers relative to a tree reluctant to be chopped, or a boulder reluctant to be rolled. It is the age of learning one's balance on precarious footing; it is a time of making a playground of the outdoors.

Six to fourteen is also the age that can profit most from organized instruction - as in the school biology class taken on a field trip. The earlier the experiences, the more useful will they be as later educational challenges come back over the same material. Bruner spells out the mechanics of "spiral education"; Edward Yeomans in a forgotten book suggested the same many years ago, and pointed out the parallel values of working with natural materials in the school shop.⁵ A block of wood is just as unforgiving of casual treatment as are the rounded stones we cross streams on; it doesn't take long to learn the proper treatment of each. It is the successful mastery of woodcarving and of stream-crossing that matters; not the object made or the opportunities on the other side.

In that great Harvard report, General Education for a free Society, Raphael Demos suggested twenty years ago that college education should provide materials for thinking logical, relational, and imaginative.⁶ Natural sciences were classed as logical, social sciences as relational, and the humanities as imaginative. This approach we can use also in defining the uses of the outdoors. Note the use of field trips to enrich courses in the natural sciences we have touched upon already, but the educational potentials of natural environment are much wider.

Science instruction even in high schools is moving far beyond the notion that knowledge is a compendium of facts. The task of comprehending science as an ever-changing bundle of hypotheses and methods now faces all our students. Students are being asked to grasp ideas of the natural world quite difficult to relate to their concrete experiences, and their teachers are charged with making these ideas understandable. Bruner discusses these problems; Schwab has spelled them out at length.⁷

Children find it difficult to think in terms of more than a single variable at a time, yet they must learn to deal with situations in which every parameter is changing. Science is no longer knowledge; it is understanding. I submit that a youngster familiar with an entire natural environment is well prepared to grasp the notion that mountains move, seas advance and retreat, great things happen by pure chance, and that chance itself, through probability, must replace the concept of certainty.

A youngster familiar with our Northeastern environment can understand how boulders got where they are; some left by glaciers, some by freshets as violent as they are rare. He can understand the role of extremes, and their effects on the distribution of plants and animals. He can understand the concept of random distribution when he sees the milkweed shed its seed.

Our youngsters should be at home with the concept that forest types are transitory things; that hurricanes are essential to the regeneration of the wild New England white

5. Edward Yeomans, Shackled Youth, Boston: Atlantic Monthly Press, 1921. See also his Talks In and About Schools, Ojai, California, The Ojai Valley School, 1938, and The Sun's Family and The Shop in School and Home, Ojai, California, Ojai Valley School, 1941. For these references I am indebted to Frank Jennings of the New World Foundation.

6. Committee on General Education, General Education in a Free Society, Cambridge: Harvard University Press, 1945.

7. Joseph J. Schwab, "The teaching of science as enquiry", in Joseph J. Schwab and Paul F. Brandwin, The Teaching of Science, Cambridge: Harvard University Press, 1962.

pinus; that the Great Plains with their buffalo - even the great coniferous forests of our West - were slated for displacement by the insidious advance of the deciduous trees already dominant in the East.

Longfellow's poetry will last much longer than the forest types he has described so evocatively - even if steel axe and saw had never come at all.

To handle concepts of multivariation; to think comfortably where nothing is fixed, is to be able to handle relational thought. Skills learned in one field - as biology - are transferred easily to all others. The greatest use of this type of thinking will be in the social sciences, and in the individual's reflection upon his own place in his society and his society's place among the relativities of the world.

The outdoors has a special role in our humanistic tradition; there is a similar but lesser role in the tradition of Western Europe. The cult of "the wilderness" flourished in the Romantic tradition in the last century, with the noble savages of Cooper; the simple, the remote, and the picturesque. Sir Walter Scott's romantic tales of border warfare, the Waverly Novels, sold five million copies from 1813 to 1823. Melville took his readers to the South Seas; Thoreau just went to Walden Pond; Ralph Waldo Emerson added benefit of clergy:

"Nature is made to conspire with spirit to emancipate us. Certain mechanical changes, a small alteration in our local position, apprizes us of a dualism. We are strangely affected by seeing the shore from a moving ship, from a balloon, or through the tints of an unusual sky. The least change in our point of view gives the whole world a pictorial air In these cases, by mechanical means, is suggested the difference between the observer and the spectacle - between man and nature. Hence arises a pleasure mixed with awe; I may say, a low degree of the sublime is felt, from the fact, probably, that man is here apprized that while the world is a spectacle, something in himself is stable."⁸

Emerson's final phrase may be the clue to what it is that we get from "enjoying nature".

The depth and the strength of the feelings about nature in our contemporary society come to light on occasions such as the Consolidated Edison project in Cornwall, New York, at the foot of Storm King Mountain.⁹ Even though the history of our emotional involvement with "nature" is short, short also is our time as an industrialized and an urbanized people, with population increasing almost beyond belief.

I submit that the meanings of the natural environment to people in our society have reached dimensions sufficient to be treated as a distinct subject in the humanities. This would center the study on people and their needs for imaginative satisfaction; their needs for meanings. Systematic research and teaching in this area would contribute to individual appreciation of the totalities of life as does instruction in the arts, in literature, and in music.

8. Ralph Waldo Emerson, Nature Addresses and Lectures. Boston: Houghton Mifflin & Co., 1876, pp. 50-1.

9. Discussed by the writer in an earlier paper.

Such a field of study would re-examine our cultural tradition as a whole. It would scan all American literature, not just that often murky backwater billed as "nature writing". It would reconsider landscape and its symbols; why landscape painting emerged when it did, why it passed away, and which symbols may fill its place now. This new field would consider the great thrilling experiences most of us have had at one time or another in the outdoors in terms of the parallels we have experienced in the great concert halls. Both have a way of giving me a thrill of location in time and in space.

We all need imaginative thought. We have contrived many chances to find time for it. We all dream - in fact, we cannot sleep deeply without dreaming. We all dawdle over newspapers, stare out of windows or into our beer, gaze from overlooks and viewpoints. One thing is true, I am sure - and that is that the scenery of a view is irrelevant. A view offers a chance to look away at nothing much; to see variety in distance, shape, color, and texture. One thinks about anything but what one sees at such a time. We all need the chance to look with unseeing eyes; we all need the chance freely to restructure our world as we see fit. Some of us find that the best way to do this is to be isolated, outdoors. "You cannot freely admire a noble landscape if laborers are digging in the field hard by," said Emerson. "The poet finds something ridiculous in his delight until he is out of the sight of men." ¹⁰

Freedom for the individual is a basic theme of American life. It appears in the appeal of the outdoors; it appeals in the lore of the open road. Walt Whitman, Senator Benton of Missouri, and Thomas Wolfe would have applauded the editorial in the New York Times for Sunday, November 7th, 1965.¹¹ It would be a disservice to allot this vital element of our tradition only to the natural sciences or to the increasingly mechanistic processes of the social scientists.

There is a special need for open spaces for those few and specialized camps which deal with youngsters of aberrant behavior, or from environments which could not afford necessary learning experiences. Far ahead of theory, small groups of devoted leaders have accomplished great things in working in the outdoors with children in this category. Such leaders draw intuitively upon the resources of the environment, and relate them to the needs of the child. Whether they could do as well in the urban environment is not here at issue. The fact is that these leaders love the outdoors, and have done great things with children in the outdoors. The great name in this field is that of the late Dr. William Sharpe. His work is carried on by Lois Goodrich, Samuel Weir and many others.

Recreation is a far more important matter than the term suggests. It means just what it says - a chance for the individual to restore himself - to achieve again balance and self-knowledge. Recreation then is opportunity for complementing sacrifices with indulgences, for reflecting and for restructuring, for doing those things again that have provided satisfactions before. Outdoor space provides recreational opportunities for hunters and poets, fishermen and painters, hikers and lovers, persons who play together, and persons who walk alone. Outdoor space provides release for those who feel civilized life oppressive; who seek room to do things they would not do if anyone were watching.

10. Emerson, op. cit., p. 65.

11. Hans Huth, Nature and the American, Berkeley: University of California Press, 1957. pp. 155-6, et al.

The editorial from the New York Times:

"COUNTRY ROAD - One of the forgotten benefits of the superhighways is the fact that they take the hurry-hurry traffic off the lesser roads and leave the back roads that wander through the woods and over the hills to those who
(continued on next page)

I think that we can make a preliminary classification into outdoor recreation which requires physical contact with details of the environment, and that which is for observers only. Let us call these the touched and the untouched.

Recreation requiring touchable environment is for active users of outdoor resources - hunters, scramblers, tree-climbers, and the more vigorous of the hikers, particularly those who scorn trails. General use of open land for this kind of recreation leads to destruction of flora, and general commotion. This is one cost of recreation - and I would allocate part of every park to use as a "stamping ground," - where nothing would be barred short of mayhem or murder. Many of us seek a chance for aggressive release of energy - for rough-housing, building things, tearing down other things, throwing rocks; chasing one another and romping generally. I think that this need should be recognized and provided for. Too much preservation of outdoors reflects the opposite view - the glass-case approach which is perfectly suitable for the precious feature, the beauty-spot, the magnificent stand, the graded trails to nature museums. This is for outdoor resources that best can be enjoyed if nobody touches anything. Each public park should provide for both needs. Unless there is a place to throw things, things will be thrown in the wrong places.

Our public park tradition has been built up by the donors of parks, rather than by users. There is consequently built into policy much of the view toward nature, plant, and animal life, and the need for solitude that we associate with the older, and more deeply acculturated members of our society. Persons with a deep but inchoate feeling about "nature" find a personal identification with familiar spots. They feel a resonance with the environment; they feel part of a larger whole. They feel in a way proprietors of this extension of their own selves, and resent intrusion. Particularly, they resent others' actions which indicate failure to share their feelings. Thus the difference in behavior between, for instance, the members of the Sierra Club, and those users of the parks and forests who strew litter along the trails, defile the camping places, and use motors on mountain trails and in isolated lakes. We have here a difference in cultural appreciation which must be understood, and provided for.

Nature-lovers sometimes appear to have a low tolerance for others. This is understandable. Also understandable is the desire of hunters and fishermen to get to favorite spots as efficiently as possible, and the need for a place to run, shout, and play as we did when we were young. Accommodation of everyone should be simply a matter of good planning.

But if all our resources are planned, what will happen to the spirit of freedom? Where will be the Open Road? Will planning itself take from us a vital part of the enjoyment of the environment?

The answer is in the negative. There is a great deal of countryside available to every city; there is much land that will be developed in no foreseeable future. Resources exist to

would dawdle and enjoy the countryside. There one can stop to look at a tree or a vista, even to get out and walk and know the feel of autumn underfoot. There one can pause to watch a busy squirrel, or a skein of wild geese honking southward, or a brook meandering across a meadow.

The highways too often seem to lead from traffic jam into traffic jam. But the byways lead to the nearest thing to peace and leisure one can reach on wheels, to the uncomplicated serenity of woods and hills and streams. They lead back to the land itself where time is measured by seasons and years, not by hours and minutes. Back to hills that were old when man built his first cities, hills that change only on their own terms.

They lead to quiet places where one can see a hollow glowing with the golden candles of autumn larches, to hilltops where the sky is a huge blue bowl, to lowland beaver meadows, to cattail bogs, to brown old farmhouses with blue curls of fragrant wood-smoke at their chimneys. In a sense, these back roads lead to a simpler yesterday, perhaps; but those who seek them out are not searching for the past. They are looking, rather, for the enduring now, the persistent reality of a native tree, uncluttered hill, a sunset."

Nov. 10, 1965

satisfy all our needs for a long time to come - but that is not to say that these needs will necessarily be met efficiently and economically. Planning is vital; it is not a threat.

There are many opportunities to be explored. It should not be necessary to establish public ownership to provide all needs for outdoor recreation. Adjustments in the law of liability and of trespass should make feasible wide use of private lands for public purposes. Abuse of this privilege should be immediately punishable - as should private destruction of environmental amenities. We should recognize that private land near cities is clothed with a public interest - such private land approaches the status of a public utility. We can explore the possibilities of multiple use of space; building playgrounds on top of factories, and viewing points on top of otherwise objectionable highrise buildings. We can so filter water that all reservoirs can be used for recreation; we can forbid signs that say "Do not walk on the grass". Worn spots are a cheap price to pay for the freedom to wander crosslots.

I suggest these as research topics:

1. Analysis of the meanings of open space to people.
2. Determination of which members of our society appreciate each meaning.
3. Calculation of the aggregate demand for use of outdoor space by each category of user.
4. Calculation of present resources, in terms of known needs.
5. Calculation of the costs of preserving existing uses, and of providing additional uses to meet existing needs. Estimates of allocation of these costs in terms of uses, users, and levels of government.
6. Inquiry into improvements in cost effectiveness through new devices in multiple use of resources.
7. Projection of these values into the future.