GRAND CANYON

JOSEPH WOOD KRUTCH

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WHAT MEN? WHAT NEEDS?

Many beautiful areas in many parts of the Southwest are far less accessible and far less frequented than Grand Canyon. Some of them I have visited again and again during the course of twenty years but never without seeing some evidence of human activity which had diminished or destroyed things I had come to enjoy. Something precious had disappeared because it could not coexist with energetic exploitation.

"Oh, well," I have sometimes said to myself, "most of it will probably outlast my time." But I have never been completely comforted by the thought. All concern for posterity aside, I do not like to think that something I have loved may cease to be, even when I am no longer here to take my joy of it.

Perhaps no radical and permanent solution of the problem is possible. The world grows more crowded year by year and at an ever increasing rate. Men push farther and farther in their search for "resources" to be exploited, even for more mere space to occupy. Increasingly they tend to think of the terrestrial globe as *their* earth. They never doubt their right to deal with it as they think fit—and what they think fit usually involves the destruction of what nature has thought fit during many millions of years.

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Only the United States among highly developed nations can still offer its citizens the opportunity to visit large regions where nature still dominates the scene. And that is because only the United States began at a sufficiently early stage of its development to set aside as public lands some of the most attractive of such regions. We had national parks before England had established so much as one small nature reserve. In so far as this is true it suggests hope. We have not been entirely blind to what we have, nor to the danger of losing it.

"Never have I seen such wonders or met landlords so worthy of their land. They have, and still have, the power to ravage it; and instead they have made it a garden." Thus wrote the visiting English naturalist, James Fisher, in the book called *Wild America* upon which he and Roger Tory Peterson collaborated. Nor is the tribute wholly undeserved. But Mr. Fisher politely refrained from stressing either the unearned blessing we received when we inherited the continent from a red man too little advanced technologically to have defaced it, or the fact that the "power to ravage" which the National Parks Act was intended to hold forever in check still ominously exists. How much longer the check will hold is uncertain; and there are signs that the American people—or at least its leaders—are less concerned than was the generation of Theodore Roosevelt to preserve for posterity some of the wild portions of our heritage.

No one opposes "conservation" as such. But many insist upon defining it in their own way. There are always rival claims to every unexploited area, and even the parks cannot stand up against such claims unless the strength of their own claim is recognized. Unless we think of intangible values as no less important than

Intangible Values

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material resources, unless we are willing to say that man's need of and right to what the parks and wildernesses provide are as fundamental as any of his material needs, they are lost.

Those who would cut the timber, slaughter the animals as game, turn cattle loose to graze, flood the area with dams, or even open them up to real estate subdivision are fond of saying, "After all, human needs come first." But of what needs and of what human beings are we thinking? Of the material needs (or rather profits) of a few ranchers and lumbermen, or of the mental and physical health, the education and spiritual experiences, of a whole population? We do not tear down a high school because the building industry can prove that it could profitably erect an apartment house on the site and that tenants would be glad to occupy it. We say, instead, that education pays off in a different way and that the space occupied by schools is not wasted. Much the same thing we say also of the space taken up by the green of a city square. But if parks and other public lands are to be held only until someone can show that a "use" has been found for them, they will not last very much longer. If we recognize that there is more than one kind of utility and that the parks are, at the present moment, being put to the best use to be found for them, then they may last a long time—until, perhaps, overpopulation has reached the point where the struggle for mere animal survival is so brutal that no school or theater, no concert hall or church, can be permitted to "waste" the land on which it stands.

No other recent threat is quite so fantastic as that recently raised in Arizona where a small group of farmers cultivating the irrigated desert have persuaded

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vide—namely, the experience of being in the presences of nature's ways and nature's work.

Proponents of the recently defeated proposal to flood the Dinosaur Canyon by building a great water-storage dam answered defenders of the national monument within which it lies by saying that the "recreational value" would be increased rather than diminished. They were so sure of their case that they showed pictures of the gaunt canyon with the bones of prehistoric monsters exposed *in situ* and contrasted them with other pictures of artificial lakes behind other dams where bathing girls reclined on sand beaches and speedboats cut across the waters. From their own point of view they were right. But however delightful bathing girls and speedboats may be, they are at least different from, rather than merely better than, what Grand or Dinosaur Canyon provides. Moreover, the places where one may find bathing girls and speedboats are multiplying, while those where one may find solitude, quiet, and the grand spectacles of nature become fewer and fewer.

What is called progress is too often the exchange of one thing (good or bad) for something else, good or bad. Even education means too often learning something at the cost of forgetting something else. But both are pursued so uncritically that we seldom stop to ask whether what we get and learn is worth what we are losing and forgetting.

A majority, increasing perhaps, is ready to settle for "recreation" in this most recent sense, and many may by now actually prefer it. This is so much the age of technology and the machine that machines come to be loved for their own sake rather than used for other ends. Instead, for instance, of valuing the automobile because it may take one to a national park, the park

places of solitude & grand spectacles — may tie in with mention of dam at end.

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The concession made in that last clause is a large one. Ivory towers (including these centered around a campfire) have often been more than things to shut oneself up in—they have been also towers to look out from, and places to think new thoughts or to remember old ones. The few who choose them are usually those who, granted their temperaments, could not have served society in any better way. And as Mr. Dobie says, a true democracy would recognize that fact. Even most of those who know that, for themselves, some contact with a biosphere means greater health, happiness and content would not deny that what they desire is not to renounce civilization but to enjoy its intellectual and emotional developments without becoming completely a prisoner of its machinery. Even Thoreau who had, or thought he had, so much sympathy with aboriginal wildness often realized that it was not really the life he wanted to lead. "Decayed literature," he wrote, "makes the richest of all soils."

Considered as absolute goods, solitude and freedom from the shrieks and clatters of a mechanized civilization raise the same kind of questions as are raised by "Life in nature." Few men want to be most of the time alone and this is surely their good fortune since most are probably destined to be so less and less often. The only question still worth asking in a civilization like ours which has committed itself to artificial living in a crowded environment is the question of whether or not solitude and quietness are important *as elements;* whether or not at least the opportunity to ex-

Value of Solitude

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perience them occasionally as part of a vacation or, in the literal sense of the word, a re-creation, is important. Does to experience them even occasionally provoke thoughts and suggest values not only significant in themselves but likely to provide critical insights into civilization which may influence favorably the course it takes?

How such questions are answered will depend in part upon what one believes about the nature of man as well as upon what satisfaction one, as an individual, happens to take in solitude, quietness, or the spectacle of nature. How fundamental, how nearly unchangeable, is that desire for all these things? Have those who no longer seem to desire them advanced farther along the road to the future than those who do? Are they merely "better adjusted"? Or are they, by just that much less, whole men? Even on the rash assumption that someday mankind will have no contact with anything outside the noosphere, it may still be true that human nature cannot be remade as quickly as his environment can and that he will still, for a long time, suffer a sort of nostalgia for the universe he so long inhabited.

Albert Einstein once told the students at the California Institute of Technology that he doubted whether present-day Americans were any happier than the Indians who were inhabiting the continent when the white man first came. Not many are likely to agree with so extreme a statement but quite a few, I think, would admit that, leaving the Indians out of it, we are not *as much* happier than our grandfathers as it would seem our gains in health, security, comfort, con-

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prospect look even brighter? Perhaps not. But that does not convince me that such a world would not, in actual fact, make for more happiness than the one they are promised.

A true democracy will, as Mr. Dobie said, have some consideration for the minority which wants what contact with nature it can get. Perhaps it will consider also the possibility that a larger minority would be the better for the opportunities it wants without always knowing that it wants them—as thousands are discovering every year on a first visit to one of the national parks.

The decision whether they and the wilderness areas are worth having is one that must be made anew. It was made once a generation ago when the Park System was established with the explicit statement that the areas set aside were to be *permanently* reserved for specific purposes—not just preserved until some other use could be found for them. The Dinosaur Canyon project was a deliberate challenge and (as some of its proponents explicitly stated) an attempt to establish a precedent. The attempt was frustrated; but similar attempts directed elsewhere will be made again. If the original intention is now reaffirmed, the parks, monuments and wilderness areas may remain to refresh, educate and inspire for an indefinite number of generations to come.

The discovery of America meant different things to different people. To some it meant only gold and the possibility of other plunder. To others less mean-spirited it meant a wilderness which might in time become another Europe. But there were also not a few whose imaginations were most profoundly stirred by what it *was* rather than by what it might become.

The wilderness and the idea of the wilderness is one of the permanent homes of the human spirit. Here, as

many realized, had been miraculously preserved until the time when civilization could appreciate it, the richness and variety of a natural world which had disappeared unnoticed and little by little from Europe. America was a dream of something long past which had suddenly become a reality. It was what Thoreau called the great "poem" before many of its fairest pages had been ripped out and thrown away. The desire to experience that reality rather than to destroy it drew to our shores some of the best who have ever come to them.

That most of it is no longer a wilderness is no cause for regret. But it is a cause for congratulation that the four centuries and more which have passed since Columbus set sail have not been long enough to permit men to take over the whole continent as completely as they long ago took over Europe. And that fact is responsible for an important part of the difference which still exists, spiritually as well as physically, between the Old World and the New. The frontier, so long an important influence on the temper of the American, no longer exists. But as James Fisher realized with surprised delight, the continent can still boast a spaciousness, a grandeur, a richness and a variety which a European can hardly imagine until he has seen it.

These are things which other nations can never recover. Should we lose them, we could not recover them either. The generation now living may very well be that which will make the irrevocable decision whether or not America will continue to be for centuries to come the one great nation which had the foresight to preserve an important part of its heritage. If we do not preserve it, then we shall have diminished by just that much the unique privilege of being an American.

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if there are, they are not neces-
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brief and informal aerial sur-
er another much more exten-

sive, planned to cover a large part of the whole southwestern wonderland, including the Monument Valley region of southern Utah. Picking up the Colorado River to the west we followed it down through Glen Canyon where construction has already started on the dam which will flood some of the wildest scenery in the entire United States, we flew along the snow-blocked North rim of Grand Canyon, across the low, sun-soaked desert of Death Valley and over the crest of Mount Whitney's fourteen-thousand-foot peak—the highest point on the continent south of Alaska but by plane only a few minutes from the below-sea-level floor of Death Valley. Then we returned to Lake Mead and again picking up the Colorado as it emerges from its imprisonment behind Boulder Dam, followed it to the end of its story at the head of the Gulf of California.

There the great and adventurous river drops the last of the heavy burden of soil, sand and rock-fragments which it has picked up along its course and with a portion of which it is still scouring the Canyon's deepest gorge. The result is a great delta almost blocking its own course to the sea and perhaps destined in time to become an important geological formation as the sand and silt consolidate into stone. Today, while still in the course of formation it is an impressive flood plain across which the river, now broken into meandering streamlets meanders toward its Nirvana in the waters of the Pacific. "Even the weariest river winds somewhere safe to sea."

Such a bird's-eye view of a whole region relates its parts as no other experience can and though it is rather more than most tourists are likely to undertake even a modest flight confined to the immediate neighborhood of the Canyon will abolish the feeling which I at least

ary individual can count for as the
his fellow human beings submerge

ure of having Point Sublime entirely
, half a dozen or more cars are likely
rip any day during the season. But
ls will take one to other less visited
pretty likely to have the woods and
elf. The Robber's Roost road, for ex-
one to choose. The gang of horse
for its name departed long ago,
ue memory, and their ghosts have
It is an interesting spot. Having
then go on to the east rim which
en made one of the principal sights
happens to have been left inacces-
ot over a poorish road. Here one
highest points of the Kaibab dome,
a have been subjected to such vio-
he rim has receded farther than
ge and one seems to be looking at
canyon at its bottom.
s I spent there neither sight nor
n being intruded. And, as so often
the Canyon, I had the queer sense
. For all anyone who had been sud-
e by a time machine could deduce,
age from the end of the Permian
l Columbus yet set sail; had Car-
r that matter, man yet made his ap-
Nothing that the eye could see had
of these events.
ve been too much surprised if a
ne sailing across the gulf on leath-

ery wings. What actually did appear overhead was a group of three ravens. "Ah," I said to myself, "these are obviously relatively modern times." And it was then that I made a discovery about ravens. They have long had a somewhat sinister reputation which Edgar Allan Poe merely exploited and confirmed. Their voice is far more guttural than that of the crow but it is no sweeter. In populous places, as I have often noticed, their comments are reminiscent of Cowper's jackdaw and they sometimes provoke the same reflection:

> There is a bird who by his coat
> And by the hoarseness of his note,
> Might be supposed a crow;
> A great frequenter of the church,
> Where bishop-like he finds a perch,
> And dormitory too.
> . . . . . .
> He sees that this great roundabout
> The world, with all its medley rout,
> Church, army, physic, law,
> Its customs and its businesses
> Is no concern at all of his,
> And says—what says he?—"Caw."
>
> Thrice happy bird! I too have seen
> Much of the vanities of men,
> And sick of having seen 'em
> Would cheerfully these limbs resign
> For such a pair of wings as thine
> And such a head between 'em.

But in lonely places the tone of the raven's comment seems to change, though I am willing to admit the possibility that the change is more in my attitude than in his. But, however that may be, there is no doubt that when no other living thing is about, he begins to seem almost companionable. His caw or his croak seems less

a jeer, more like a friendly hail as he passes, sometimes high overhead intent on business of his own, sometimes swooping low as though deigning to take some interest in the earth-bound creatures who have intruded upon him.

It is a lonesome sound, so most people say. But not so lonesome as no sound other than the wind in the trees or the rattle of a stone which has waited millions of years for this particular moment when it has been ordained that the Canyon shall be widened by precisely its half-inch width. At least the raven is, like us, a creature confined to a narrower band of time and, like us, conscious of certain things whether he be conscious of time or not. I am almost ready to swear that what I have heard him call was: "Hi there, fellow creature!"

11

THE MOST ANCIENT INH

Shiva Temple is one of the largest of t
time and water have separated from t
rises some four thousand feet from the
covers about three hundred acres, and
never—so far as anyone then knew—be
that year scientists from the American M
ural History organized an expedition
supposed mysteries. Erosion had mad
land many thousand years ago—twelv
guessed some geologists, though one me
pedition spoke hopefully of a possible
sand. What might not possibly be found
safe isolation?

"Dinosaurs!" suggested one newspap
garding the fact that the last dinosaur
died millions of years before there was a
less a butte later detached from it. But
the isolation was as old as the last
either plants and animals elsewhere ex
survive there or distinct species might
like those which Darwin, not yet an e
astonished to find limited to single isla
lápagos group. One member of the
said: "There is no reason why small a

narked the other seasons of the year,
t this my life in nature, this particu-
al phenomena which I call a year,
mplete. I listen to a concert in which
anting. The whole civilized country
turned into a city, and I am that
y. . . . Primitive Nature is most in-
take infinite pains to know all the
ng, for instance, thinking that I have
em, and then, to my chagrin, I hear
perfect copy that I possess and have
estors have torn out many of the first
dest passages, and mutilated it in
uld not like to think that some demi-
fore me and picked out some of the
I wish to know an entire heaven and

s time more pages have been torn
gland and more of its grandest pas-
The loons, for instance, came regularly
and inspired him to write one of his
ssages. Even then, however: "At ru-
all the Milldam sportsmen are on the
on foot, two by two and three by
nt rifles and conical balls and spy-
e rustling through the woods like au-
east ten men to one loon." Today, so
rson reports, "It flies over Concord in
ry rarely alights."
ons are so often shot at by "sportsmen"
Thoreau's time. But "progress" is a per-
emy of nature than the hunter ever
ent, so I learn from the press, Walden
proved into a bathing beach and, in
nk trucks are spraying roadsides from

which will be eliminated the humble little flowers Thoreau loved. One must now go to a national park to find a nature not more drastically expurgated than Concord was in his day. From Grand Canyon itself the cougar and the wolf have been all but exterminated in the name of what we call "predator control" and Thoreau called "depriving a tribe of its warriors." Much —very much—is still left, though everywhere outside (and sometimes within) the legally protected areas destruction goes on. "The squirrel has leaped to another tree; the hawk has circled further off, and has now settled upon a new eyrie; but the woodman is preparing to lay his axe at the root of that also."

Such thoughts as these are, I am glad to say, afterthoughts. While window-shopping in a region as rich as Grand Canyon still is, I am too constantly diverted by what I see to think much of what is no longer to be found or of the fact that for succeeding generations my diversion will be less rewarding than it is now. If a porcupine is an event—they are protected in the park itself but cruelly left to die in traps within the forest just outside—there are so many minor items that I must pass some of them by.

Of course none of this is science or likely to add anything to it. The "serious amateur" still occasionally adds his bit, but the day is long past when the mere window-shopper has one chance in a thousand of seeing anything not seen and duly noted long before. To pick up even what Newton called "a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me" one usually needs nowadays to be a specialist, and even within the limits of one science the specialist must specialize. He is a zoologist or a botanist or a cytologist or a biochemist and if he is a botanist he limits himself to the ferns or

The finest workers in stone are not copper or steel tools, but the gentle touches of air and water working at their leisure with a liberal allowance of time.

Thoreau

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62-16

this would perhaps be perfect at very start of book.

one has left a name and a bit of a legend behind him.

They say the Lion and the Lizard keep
The Courts where Jamshyd gloried and drank deep. . . .

Well, I don't know how much John Hance gloried or how deep he drank. I do know that the mountain lion does not keep court there because the lion has been all but exterminated in the area and his extermination has not been an unmixed blessing, even for man. But the lizard eludes us, and when I visited Hance's cabin a few minutes before taking up my perch, a lizard was sunning himself on the sagging door Hance had built for himself.

Modern man will not give up so easily. Scarcely a mile from where I sat a paved road was carrying cars to a village from which telegraph and telephone reach out. Magazines and newspapers are delivered. Occasionally an airplane hurtling across the continent passes overhead. Several years ago two of them collided improbably above the Canyon and fell into its depths. These—or at least some of them—are good things to have but not unmitigated comforts. They suggest by what a narrow margin (and possibly for how short a time) such primitive, isolated spots as my perch may continue to exist.

How many more generations will pass before it will have become nearly impossible to be alone even for an hour, to see anywhere nature as she is without man's improvements upon her? How long will it be before—what is perhaps worse yet—there is no quietness anywhere, no escape from the rumble and the crash, the clank and the screech which seem to be the inevitable accompaniment of technology? Whatever man does or produces, noise seems to be an unavoidable by-

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product. Perhaps he can, as he now tends to believe, do anything. But he cannot do it quietly.

Perhaps when the time comes that there is no more silence and no more aloneness, there will also be no longer anyone who wants to be alone. If man is the limitlessly conditionable creature so many believe him to be, then inevitably the desire for a thing must disappear when it has become no longer attainable. Even now fewer and fewer are *aware* of any desire to escape from crowds, and most men and women who still make traditional excursions to beach or picnic grounds unpack their radios without delay and turn on a noise to which they do not listen. But it is not certain that this is not a morbid appetite rather than one which has become normal or that it, any more than any other morbid appetite, brings real satisfaction when it is gratified.

There is also another aspect to the situation. At least a few do still consciously seek quietness and some degree of solitude; a great many more seek it less consciously, but seek it nonetheless. If this were not so, the various national parks would not be so persistently visited. When all possible discount has been allowed for the irrelevant motives, for the frequent failure to get what the visitor presumably came for, and for the perverseness of many who try to avoid the very things which the parks have to offer, the fact still remains that many find (and many others do not find only because they do not know how to find it) that brief experience with solitude, silence, and a glimpse of nature herself which, to some greater or less degree, they do feel the need of.

As a matter of fact, the deliberate search for them is a modern phenomenon not, I think, because they were never before enjoyed but because they were

taken for granted. Only when they began to be scarce, only after the natural rather than the man-made, and solitude rather than company had to be sought after, did the great empty spaces become attractive or, indeed, other than alarming. Man's place in nature was precarious long before the situation was reversed and it became nature rather than man whose survival seemed uncertain.

If the first white man ever to see the Canyon felt anything except frustration when he came upon this great barrier he saw no hope of crossing, his journal gives no hint of the fact. Cárdenas had been dispatched by Coronado on a side trip in order to scout out a part of the region where they were searching for the seven Golden Cities that did not exist, and Cárdenas was in no mood to look at scenery or to indulge the luxury of wonder. He had had more than enough of empty, inhospitable spaces. He had had hardships and "adventures" aplenty. He had made almost impossible journeys overcoming almost unconquerable impediments. And here was a difficulty which could not be overcome. He had been led on and on in the hope that the difficulties were almost over. Now, after all he had gone through, nature laughed and said, "Thus far shalt thou go and no farther." In his day even the Alps were still regarded almost universally as "horrid"—a barrier to be dreaded before one came upon it and to be looked back upon with shuddering after it had been conquered.

The white men known to have seen the Canyon during the next three centuries can be counted on the fingers of one hand. And when in 1857 Lieutenant Joseph C. Ives made for the United States Government an extensive reconnaissance in the region of its western end, he wrote in his report: "Ours has been the first and

will doubtless be the last party of white profitless locality. It seems intended by n Colorado river, along the greater portio and majestic way, shall be forever unv disturbed."

Forgivable, perhaps, since Lieutenan hardly be expected to know either how would increase the mobility of men or, w more important, that the America whic his day still largely wilderness, was so s the America in which wilderness is a rari

Forgivable or not, this was certainly luckiest prophecies ever made, and I hardly less astonished than Cárdenas t this region "destined to be forever unv disturbed" is actually one of the most ited on earth—at least if one uses the to mean sought out purely in order to be two of the words he used do nevert the beginning of the change in man's a the more grandiose and least conquera the natural world. Cárdenas would not the Colorado as "majestic." That word c used only by a man upon whose sensibi titude had already taken some effect. Iv the changed language of Europeans to mountains" had become "awful mount once merely terrifying had become "s centuries had been required to change may into the reaction which Ives revea the word "majestic" but almost equall "lonely," which is already touched w aura. Hardly more than half a century destined to be "forever unvisited" was preserved for its own "awful" sake.

Another change equally significant

n airplane I kept saying to myself that
relief maps really were right after all
ld never have quite believed it had I
before this.
of the five and a half hour trip no sign
tation was visible. Even Boulder Dam
e world," as it is proudly called) is a
nt feature and therefore a salutary re-
scale of man's efforts is still a puny one.
e a little green patch at the mouth of
von signifies the presence of a perma-
rmanent stream. At Havasu Canyon a
sents the successful effort of a primitive
such advantage of a natural situation as
nology permits.
tered little plateau lies about midway
m and the river. Just above it Havasu
nt of its channel to fall spectacularly a
nto the milky blue pool at its base. Green
e plateau and creeps a little way up the
y this green patch is larger than it was
he community, then about the same size
cultivated these same fields. A few new
ve been introduced as well as some im-
ls of cultivation. But that is about all.
one anthropologist's study there is no
he United States where a native culture
much of its aboriginal character.
gain we circled the small area and re-
he paradoxes of an unprogressive civili-
the rest of us Americans, the Havasupais
quered nature" or even "controlled it."
pired to no more than the ability to live
at has meant so little transformation that
nce one might have difficulty in deciding

whether their oasis was man-made or only an unusually large natural one like a dozen others. They had left and they would have continued to leave the air through which we were nonchalantly flying to the ravens and the eagles. They would never have increased in numbers until only by the "control" and "conquest" of nature could she be compelled to support them.

They have few of our comforts and little or nothing of our artistic or intellectual culture. The men tan deerskins; the women weave baskets. Their religion and their ceremonies are fewer and simpler than those of many other Indian tribes. They treat disease by singing instead of with antibiotics, and I suppose that their average life span is shorter. Yet, their community seems to belong where it is. It is a blessing not a blot on the landscape—which is not a thing that can be said of many communities created by more advanced civilizations.

Man has created some beautiful things—sculptures, paintings, vases and, occasionally, a building. But such beautiful things are few by comparison with the uglinesses he is responsible for, and I do not see how anyone could dispute the statement that the physical world he has taken over is less good to look at because of him or that it grows less and less so from day to day. Most people would, I suppose, maintain that this isn't, after all, so very important. But from an airplane one gets a very detached view, and if Ernest Renan was right in his guess that "The universe is a spectacle which the good God created for his own entertainment," then I am inclined to think He must regard us as having detracted from rather than added to it.

As for man's entertainment rather than God's, that is a different matter and depends upon variable tastes.

Even questions of necessity or utility aside, there are still many to whom Lake Mead is an improvement of the landscape from every point of view. What strikes me as the banality of its tidy shore, its speedboats and its aquaplaning bathing beauties is to others more beautiful as well as more entertaining than the natural grandeur of the Canyon or the modest man-made charm of the Havasupai's oasis. It provides "a recreational area" and to those incapable of awe, intellectual curiosity, or aesthetic appreciation "recreation" is the only nonutilitarian activity which has any meaning. That all recreation areas are pretty much alike, that swimming behind Boulder Dam is much like swimming behind any other dam, and that every landscape is much like every other once it has been thoroughly "improved" doesn't matter. The fact that at Boulder the slot machines of Nevada are within easy reach is to them uniqueness enough.

One of the philosophers employed by the Tennessee Valley Authority summed the whole thing up in a sentence which is a masterly example of the kind of language befitting the attitude: "We must never neglect the development of the recreational potentialities of impounded waters." And it is surely better to "develop recreational potentialities" than to do nothing to relieve stark utility. But our civilization is rapidly becoming one in which only two values are recognized: power and amusement. It would be a pity if the last refuges where man can enter into another kind of relation with the natural world should be improved out of existence by even the most well meaning. The park system of which Grand Canyon is so striking a part was planned by men who spoke of "preserving" certain of the grandest examples of the American continent's natural beauties. Gradually one has heard less and less

about "preserving," more and more
ment" and "utilization for recreation.
are neither identical nor even cor
pleases me much to note that since th
written the Park Department has is
recognizing this point of view.

The sight of Havasu Falls reminde
the geologists say that there are thre
falls quite distinct in their origin I
could remember, seen but two of th
I had been told, was represented b
Little Colorado which none of my n
which ought to lie somewhere within
dred miles of Havasu Canyon. T
seemed to be to look for these falls,
nor the pilot knew where they we
about a bit before the latter tossed
quiry: "Where are the falls of the
Almost immediately, from some plan
sight of, came back the reply: "About
east of Sunset Crater." And since
easy to find, so were the falls. They
cessible, seldom visited region and
the river is dry, though on the occa
considerable volume of water was
to an inspector of waterfalls (to wh
just appointed myself) their chief
fact that they represent the least co
sorts.

Niagara is a grand example of one
running across a bed of hard rock s
point where this hard rock gives w
Naturally, the soft wears away faste
river is tumbling from the layer of

a meandering stream. As a matter of
ecks form what geologists call "an en-
er." But what, one wonders, can have
n this feeble little current into a tor-
h and swift enough to cut through hun-
olid rock and yet not make the straight
pected of a swift river?

will think first of the possibility that
of her periodic convulsions, suddenly
he flat surface across which the stream
making it swifter and for some other
undant. But that won't do. Tilt the
brook, and the stream will simply leap
ies of its low banks to take a shorter cut
d to low. Under those conditions it
nel but it would not be the channel of

vever, an obvious explanation of the
nd must have risen, but risen so slowly
was never dumped out of its channel;
l, that it deepened this channel as fast
he land rose and thus preserved the
ad taken when it was too feeble to do
the demands of every minor variation

on would never have been accepted
probably never have occurred to any-
s ago. Like all the explanations offered
y, it assumes vast stretches of time and
ne earth has existed for very much
one formerly dreamed that it had. The
ge was measured in a few thousands,
llions of years, was supported by the
ut even without that, the assumption
itable to a creature who instinctively

measures things on a scale related to his own experience. It just didn't seem probable that anything had endured so much longer than man or the history he knew. Yet the existence of the Goosenecks and the Canyon—for which no credible explanation not involving millions of years is discoverable—is just one of the many kinds of things which gradually forced upon the human mind the intellectual conviction that the mountains, plains, and rivers among which man passes his brief life are old beyond his power to grasp, and make demands on his imagination that it can hardly compass.

Was Grand Canyon formed in precisely the same way as its small brother, the Goosenecks? Though many nineteenth-century geologists thought so, it is now generally believed that the explanation is not quite so simple. The Colorado also winds back and forth, but its meanderings are probably, in part at least, the result of rock structures encountered during its downward progress. It is not, in other words, merely the entrenchment of early meanders. But the essential fact that remains is this: The Colorado, like the San Juan, once flowed across flat country which lay at approximately the level of the present stream bed. It had climbed no mountains to get there; resisted no impulse to run steeply the shortest way downhill; and its height above sea level was not greater than it is now. The river, though it cut through rock now forming the rim, was never "up there."

Slowly, however, the earth began to rise under the river—never fast enough to dump it out of its channel, never so fast that it could not cut downward more rapidly than the earth rose. At the same time, the Colorado was becoming a mightier river. When the Rocky Mountains first rose, they had brought down more