The Quality of Change:
Growth of a Whitewater Resort in North Carolina

by
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1976

Submitted to the Department of Architecture in Partial
Fulfillment of the Requirements for the Degree of
MASTER OF ARCHITECTURE
at the
Massachusetts Institute of Technology

May, 1983

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ABSTRACT

This thesis is a study of change and constancy -- planning for
incremental growth in a manner that will give emphasis to the whole
and not the increments.

The Nantahala Outdoor Center is a center for white water activities
in western North Carolina. A portion of each season's revenues is
channeled into improved and new (3000-5000 square feet) facilities.
Determining what to build and where is done on a season-by-season
basis relative to available finances and current need. As might be
expected, this year's projections do not always match those of last;
time frequently reveals new factors for consideration and demands a
flexible strategy for mapping the future. Expansion problems have
been accommodated up to now by taking the path of least resistance,
siting each new structure independently of other structures, one
building for each need, eliminating considerations of connection
between old and new. But at some point, this system has its breaking
point and the result becomes similar to what happens in the typical
suburb -- discrete bits of building consume the landscape in a uniform
fashion, eradicating significant differences between one place and the
next. The solution is not in building more at one time, but in careful
consideration of how one assembles the pieces. This thesis is the
study of that assemblage, looking to maintain the ease and flexibility
of building each piece independently without compromising the meaning
and quality of the whole. Additional considerations and influences
include building with self-help (Raft Guide Construction Company),
employees of the Nantahala Outdoor Center, people with building
experience but who are not builders by trade. A further concern is
building in naturally pristine areas -- harmonizing the man-made with
the natural.

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Giacometti's Telephone

Giacometti lived for many years on a Parisian courtyard, a beautiful décor of French poverty. He installed a telephone, forced probably by his dealer. After each telephone call, as he was working very often directly in gesso and his hands were caked with plaster, the telephone became more a plaster sculpture by Giacometti, a sculpture that now and then would ring.
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This thesis occurs in two parts. The first is written and attempts to draw out attitudes about architecture and how it is made that will condition the design process to follow. In this essay, thoughts about the mountain vernacular of the Smokies are used as points of entry, cuing places to start in expressing these attitudes. These writings aren't intended as comprehensive, but mostly as a beginning and a background for the second part of the thesis: the design of a whitewater lodge and resort on the Nantahala River.
QUALITY, ARCHITECTURE, AND THE MOUNTAIN VERNACULAR OF THE SMOKIES

In beginning to draw together resources, I felt the process of making this lodge complex would be influenced by its cultural surround, in particular the mountain vernacular of the Smokies. Because things move and change at a much faster pace today than yesterday, and increased specialization has brought about the need for places for which there are no precedents, the time-consuming mechanisms of tradition cannot be of as much direct help as they were in the past, nor should they be. The cultural context, built or unbuilt, is not a kind of architectural junkyard to be pirated for particular occasions. No forms are to be found ready for use. Rather, something more useful and less obvious is at work below the surface. Comparing similar landscapes, Christian Norberg-Schulz writes:

Similar reliefs preserve fundamental common properties such as infinite extension. The undulating plains of Northern France, for instance, possess the cosmic quality which is usually found in the desert, but simultaneously the land is fertile. A fascinating synthesis is thus experienced. (1)

In the architecture of the past, I'm seeking these "fundamental common properties" or, less cosmically, attitudes about quality that seem worthwhile and extendable into the language of today, with this notion of a fascinating synthesis of past and present as a goal.

Perhaps the most distinctive characteristic of the log cabin vernacular of the Smokies is the directness with which it is built. The dovetail joinery at the corners of these cabins is proudly displayed. You sense the care and toil that is the shape of the chimney. There is something about things that are handmade that is never too small or too large; the notion of scale is really only a modern one.

The hewn log literally displays the collection of blows that shaped it. Similarly, with the hand-planed planks that made his door and the beams across his ceiling -- against the light we see each stroke. (2)

This kind of transparency allows the process of making to become part of the life of the finished product, contributing to an understanding of the
The Biltmore House, Asheville, North Carolina (1895).

W. R. McAbee House, Fairview, North Carolina (ca. 1900)
building. Buildings should not be designed like telephones -- indestructable to the curious; but rather should be designed more like flutes -- resolving the mystery of inner workings. (3)

In looking at this vernacular for what there is, we also notice what there is not:

Its strength is in its directness and simplicity. What is missing in these buildings, however, are ideas... For ideas, we have to turn to the more stylish buildings -- to the Samuel Grudger House with its Federal interior, to Robertson's plantation Straun, to Italianate Fernherst, and eventually, of course, to the Biltmore Estate. In these structures are exercised and collected their builders' self-conscious notions of the appropriate, the sophisticated, the fine. (4)

In this lack of idea, the vernacular has a kind of unpretentiousness that becomes like the drawings of children.

Childlikeness, or artless simplicity, is the ideal of the artist no less than of the sage, for it is to perform the work of the art of life without the least trace of affectation, of being in two minds. (5)

Or,

The reason we can find nothing to dislike in the drawings made by children is that in them, the inherent nature of man finds expression without being thwarted or frustrated. (6)

These buildings somehow are themselves. Not that they exude this inherent nature of man, but that this quality points to an attitude that was central to its making. The process behind the creation of these buildings was one of discovery over time and not one of the quantum leaps of invention. But discovery implies something larger from which to work -- in this case, the simple lifestyles and needs of the people who built them. These buildings were discovered through simple ideas about human use ordered enough to make them buildable.

Some idea of how people use a space must be an integral part of its making. Man is not brought from the outside into the total assemblage as a piece of
furniture into a room, but rather, his nature gently gathers architecture around it. At the same time, architecture is not all pragmatics; building is certainly more than shelter. But poetry and image can only come about after an understanding of pragmatics has been reached. Poetry does not exist for its own sake, but arises out of our own humanness and our daily struggle. Likewise, poetry in architecture is born of its humanness and everyday awareness.

This attitude of discovery also relates to the way in which we understand nature. Discovery implies man is an integral part of nature -- an extension of the natural world, whereas invention implies man at some point becomes independent of nature.

A king of ancient India, oppressed by the roughness of the earth upon soft human feet, proposed that his whole territory should be carpeted with skins. However, one of his wise men pointed out that the same result could be achieved far more simply by taking a single skin and cutting off small pieces to bind beneath the feet; these were the first sandals. (7)

Thus, the two attitudes are illustrated, traditional cultures maintaining that it is easier for man to adapt himself to nature than to adapt nature to himself, and progressive cultures the reverse. The man-nature relationship can be likened to a product and its ties with the way in which it is made: Art Nouveau might have gained greater acceptance as an architectural style had there been an easier way to produce it, and similarly, the International Style could not have maintained its influence for nearly so long had it not been so closely allied with its means of production. In the same fashion, man can attain a certain degree of independence from nature, but he must be conscious of the consequences. As man has developed his technologies in increasingly specific and narrowed contexts, the uncertainties of using them in the natural world have become less and less predictable. This is most obvious in today's world of acid rains and nuclear wastes. Man can be seen in relation to nature as a ball in a mountain stream -- his movements continuous with those of the stream. Man does not comply to nature's will out of fear of retaliation, but out of knowing that bonuses are to be gained in doing so. Rilke summarizes it nicely: "Earth is not this what
you want: invisibly to arise in us." (8)

If we extend the mountain stream metaphor to architecture, then we see architecture and its forms as the ball, gently supported and shaped by the currents of the stream -- man's physical and psychic needs, with habitable buildings as the bonus for working in this fashion.

Man is a continuation of the natural world, and as such, man and nature together comprise an integrated seamless whole in which everything is equal. It is really only one world in which we live. It is our ability to decipher and categorize that brings distinctions and differences into being. Man places the "two" in duality. But dualities in nature are not to be seen as polar opposites, or as separate opposing entities, but as shades of intensity within the same field, related as complements. Two such seemingly diverse components as energy and matter have been shown to be, at a point, continuous. Man and building stand as complements to nature, not against her. In his need for shelter, man constructs enclosure, the most distinguishing characteristic of building only partially found in nature, in complement to the most distinguishing characteristic of landscape, extension. (It is interesting to note that the "idea" of enclosure is not taken to extremes; there are ways to get in and out, and light and air are allowed to penetrate. In general, man has constructed his fiercest enclosures relative to rituals and ceremonies where he is consciously wanting to be in a world of wholly his own making.)

So architecture becomes a concentration of these related intensities brought together to accommodate and assist human habitation. These ranges of related intensities, enclosure-extension, earth-sky, horizontal-vertical, etc., are best understood in terms of each other: light is more fully experienced relative to dark, and vice versa. A solid wall with a small opening is somehow more solid than the wall alone: one is aware of the quality of solidness that goes into its making in relation to some bit of light than without. Perhaps if the complementing intensities of the International Style would have been allowed to mingle a bit more, there would have been greater chance
to create real places. Design is a layering or concentration of complementing intensities in which is discovered, in the areas between overlapping complements, a set of places that becomes a building. "Architecture is the gentle resolution of overlapping reciprocities." (9) Knowing this, we can be more deliberate both in what we choose to bring into a building, and how it is placed within to gain maximum advantage.

In general, the extremes in any range of intensities are best understood in relation to each other and are least useable by themselves. Looking at structures and how they are organized, the extremes are the uniform square grid and its complement chaos. Somewhere inbetween lie field organizations. A square grid is simply a more precise field organization, which is in turn a bit more precise than chaos. The square grid is the idea of precision taken to extremes -- the idea controls. Chaos is no idea at all. Somewhere between, the idea relents and the meanings the structure is intended to support can gain a life of their own:

The interplay between structures and people remains informal so that structure seems to support social action rather than define it... It indicates one is alive in the present and not simply applying solutions arrived at elsewhere to the present circumstances. (10)

Extending this reasoning to the idea of perfection, we find it is one of these extremes and not of much use:

The precise and perfect carries no overtones, admits no freedom; the perfect is static and regulated, cold and hard. We in our human imperfections are repelled by the perfect, since everything is apparent from the start and there is no suggestion of the infinite. (11)

This is apparent in architectural history in that the classic buildings of a period are given less attention than the less precise works between periods.

When things aren't perfect, man can live inbetween:

When one doesn't consciously aim at either (perfect or imperfect), there is always a little left unaccounted for. (12)

ROBERT MOTHERWELL, *Four la Maison, Nuit la Rue*, 1957.
This little bit left unaccounted for allows our feelings to be motions rather than states -- neurons flux while muscles grasp. Buildings become descriptive and not determinative, suggesting possibilities and not recounting facts. In van Eyck's words: "charged with a specific potential for experience." The design process is not one of seeking perfection. Saul Steinberg writes: "Evolution does not lead to perfection but to the discovery of new regions." (13) In design, these regions are reviewed in light of their potential to fulfill human needs reflecting the attitude "All the news that's fit to print," and not "All the news that fits."

In working with these complements, a middle ground or 50-50 split becomes a point of confusion, one foot in the bathtub and one foot on the floor. In Yanagi's writings on perfection, he introduces the concept of irregularity to describe a quality of the outcome when one aims neither at perfection nor imperfection. In examining the plates of Japanese crafts, one notices that these irregularities never take a central position. In the tapestry, the irregularities are at the material size. They are significant but not broad, assisting the overall intent and not in competition with it. Similarly, in the Motherwell painting, the irregularities occur where black meets white.

Clarity is not lost to a welter of charged strokes, shapes tend to be simple, large and easily distinguishable, with improvisations kept to the irregularly brushed edges. (14)

The black areas are broad enough to support a fair amount of activity near their edges. Thoreau is probably right when he writes: "... a man is rich in proportion to the number of things he can afford to leave alone." (15) This is also true in architecture. If the black areas in the Motherwell painting are thought of as spaces, then the brushed edges might be the architecture. Each intensity, while best understood in relation to its complement, has a breaking point beyond which meaning is muddled.

Most of what we experience happens right in front of us, at arm's length with things that aren't much smaller or larger than ourselves. The easiest place to begin thinking about a space is at the scale with which we are most
Archeologists conception of an Indian village.
familiar. As in the Motherwell painting, a room becomes a collection of these middle-sized elements arranged in a particular configuration contributing to the ongoing quality of the whole. Successive iterations of this process at larger and smaller scales gathers more and more information and brings breadth and integration. Starting with this size piece allows a fair operation of discovery at every scale, whereas starting at the very large or the very small would not.

During the design process, the architect as orchestrator has the building in his own world, controlling the qualities and ideas that go into its making. At some point during the process, the architect must in some way "return" the building to its users. If the language he uses is not easily understood, the building remains in another realm. If the associations are too vague, obscure, or misplaced, the building will exist for the architect and the architectural profession, speaking so loudly about the wrong things to the wrong people that its users can't possibly feel in possession of it.

The early pioneers of the Smokies did not arrive in the wilderness without tools or ideas about what they were going to build. Despite the primal experience of survival in an indifferent wilderness, people influenced by the English building tradition produced log cabins of square plan, while folks influenced by the Scotch-Irish tradition produced a plan of rectangular dimension. This subtle variation of type is compared to the Cherokee Indians of the same region who built a kind of thatched hut with hipped roof and clay hearths. Upon complete examination of his resources and needs, the early settler did not set about a unique synthesis, wondering all along if this was going to be right for him. These buildings were simple recognitions of the informal systems that had been developed over centuries. The overall form of this early vernacular, although at times adapted to particular situations, was more socially and culturally directed than environmentally (not that it was out of step environmentally, but that the environment allows a range of reasonable interpretations permitting cultural factors to come to the fore). These "informal systems" or mutually shared values and images, exist for anything we might want to build. Our impressions of places are continually referred to this implicit source for some kind of recognition or reaction.
If the architect is to return a building to its users, he must be able in some way to associate with these collective values/images to be successful. If he forgets or misunderstands, he is in every sense "doing his own thing."

Looking at existing buildings for clues is useful in trying to gain a sense of these collective values/images, trying to get closer to them, but it's not the whole story. Trying to get closer to them is one thing, while trying to land directly on them is another. What the early pioneers experienced was a kind of self-fulfilling prophecy in which an architect did not come between themselves and the spaces in which they wanted to live. Nicolas Negroponte in his book *Soft Architecture Machine* takes this viewpoint in suggesting that architecture is not only a kind of middleman, but a needless middleman. The hope is that by making some of these informal systems explicit, Everyman can be helped to intelligently build for himself. The work of Christopher Alexander is along the same lines, generally hoping to make these implicit sources more explicit. While some of this is beneficial, too much is not. Some of the patterns in Alexander's *A Pattern Language* now, ten years later, seem dated and show a philosophical prejudice. After all, a theory of architecture is really a statement of underlying principle or pattern, and we've never been able to agree.

One does not try to second-guess these collective images by pinpoints of definition. This is too much of a win-lose situation. And although we as architects have a piece of these collective values/images, we must be careful to realize how they have been tampered with by our education -- they could be quite warped. (Everyone else may not be right either.) What I would like to suggest is not the elimination of architects -- I think specialization will always be a part of our world -- but through the attitudes I have been suggesting, a way in which we might design buildings that are amenable to the collective values/images of their intended users, without being pretentious or didactic.

All of the things I have been attempting to get to in these writings are ways in which the architect can bring meaning to the spaces he creates. "... man's
most fundamental need is to experience his existence as meaningful." And: "When the environment is meaningful, man feels at home." (16)

This idea of meaning then becomes the architect's tool for associating with these collective values and images, returning the building to its users, making it appropriate for them. ("Meaning" here being almost synomomous with "quality.") Form and image become second to quality and meaning, freeing the uses within to be rooted more in their own independence than anything outside them. The approach to these collective values/images is again as Yanagi writes about perfection: in not striving for either perfection or imperfection, beauty perhaps results.
The Nantahala Outdoor Center (NOC) is a recreational center and resort in western North Carolina at the edge of Smoky Mountain National Park. Its primary concern is white water sporting activities on five local rivers: the Chatooga, Nolichucky, Ocoee, French Broad, and Nantahala. Operations on the Nantahala River are the largest and provide a base of operation with most of the staff being employed here. The other rivers are within two or three hours' drive from the Nantahala and are managed as outposts, with fifteen to thirty rotating staff at each. On a typical Saturday in August, about 1700 people will float down the Nantahala River in one type of craft or another. Of these, 60% will be kept afloat by watercraft from the NOC. NOC-sponsored activities include guided raft trips (three hours put-in to take-out), canoe and raft rentals for those who think they know how, and canoe and kayak instruction clinics for those who know they don't. The instruction clinics include eight to twelve participants and run from two to five days in length. Overnight accommodations as well as meals are a part of these clinics. Additional activities in the area include backpacking and hiking in the Smokies or nearby wilderness areas, bicycle touring, and nature walks. There are also several lakes of varying size within a half-hour's drive.

Summers are of course the busiest months, requiring about 200 staff to keep things running, while winters tend to be quiet and relaxed with only thirty to forty staff remaining year-round. Winter activities center around adventure travel -- two- to three-week NOC-sponsored excursions into the rivers and mountains of warmer countries whose summers are our winter: Nepal, New Zealand, Chile, and Costa Rica.
THE SITE
Wesser, North Carolina

The site is a fifty-three acre southeast-facing wooded slope near the mouth of Nantahala Gorge. The Nantahala River, flowing at the bottom of the Gorge, defines its lower edge. The slope of the site varies from 10% near the river to upwards of 90% 800 feet above near Wesser Promontory. Summers are hot and humid, but nights are cool. Winters (December-February) include temperatures frequently below freezing, with significant amounts of snow. Protected by the surrounding mountains, prevailing winds near the river are minimal. Patterns of air movement are downstream close to the river, and on slopes, uphill when the sun is shining and downhill otherwise.

Existing facilities now in use include: a sixty-seat restaurant, staff dining for forty, twelve-unit motel with an eight-bed hostel, a two-bedroom, three-bedroom, six-bedroom, and rustic cabin, meeting room for sixty, raft rental building, retail outfitters store, a shop replete with mechanics, an occasional welder, ten always-running busses, and an old but nice house with a stone foundation, known as the Stone House, used for offices (Administration, Accounting, Adventure Travel, Architecture) and reservations.
The Stone House.

The Restaurant and Outfitters Store with the Nantahala River in the foreground.
FIRST THOUGHTS ABOUT QUALITY
Observations, guidelines, and beginnings

Through all the vicissitudes of intent, as the realities of time, economics and politics shape the process of the present and change the course of the future, some important elements can remain constant, providing points of departure and a continuing frame of reference for measuring what has been accomplished. These elements are attitudes about quality and meaning. The following are attempts at making explicit some of these attitudes.

Due to financial constraints, construction during off-season at NOC usually amounts to three to five thousand square feet per year. Determining what to build and where is done on a season-by-season basis in relation to current need. As might be expected, this year's projections are not always the same as last; time frequently reveals new factors for consideration. Any strategy for growth must accommodate these lattitudes of intent, and whatever is built should be complete enough to stand on its own, not depending on future additions for completion -- they may never happen. Expansion problems have been accommodated up to now by taking the path of least resistance, siting each new structure independently of other structures, one building for each need. In this way, one is not encumbered by considerations of connection between old and new. But at some point, this system has its breaking point and the result becomes similar to what happens in the typical suburb: discrete bits of building consume the landscape in a uniform fashion, eradicating significant differences between one place and the next. The solution is not in building more at one time, but in carefully considering how one assembles the pieces. Some of the pieces must become collected and focused, helping direct the making of real places through the assembly of meaningful adjacentcies and a full range of both built and unbuilt dimensions. In doing so, flexibility and multiple usage become realizable goals. At NOC, while most of what is built can be considered independently, the lodge cannot. It is a place of collection and focus; it is here the sense of community for guests at NOC will have its heart.
The NOC was founded in the early 1970s as a small organization, and, with friendly, hard-working, and competent service, has grown steadily. There is a real sense of community here, involving people from many different backgrounds working at different tasks. This has always been a special place, the people and the natural beauty of the area combining to make it so. It is hoped that the architecture can parallel this tradition through a gracious and welcoming spirit and countenance.

It is obvious that the people who come to the NOC are people who love the out-of-doors. The relationship of building to its natural surround should be a special one in which is reflected its builders' and their guests' respect and affection for the natural condition. But this is not the whole story. It is my conviction that people who visit here, although they may come to escape other things, do not come to escape human interaction. The relationship of people to people here should also be a special one.

The urban condition in America today is segmented and densely packed. Everyone lives in their own well-defined chunk of space, keeping to themselves. Movement from public to private is usually a minimal one, with very private and very public spaces (the extremes) dominating. A sense of community rarely develops within apartment buildings or neighborhoods, and people who aren't overly outgoing rarely know anyone outside of work. Friends usually live across town and not next door.

The rural condition is much looser and more isolated. Movement from public to private is gradual, with a predominance of uninhabited semi-private and semi-public spaces (the middle ground). People generally won't speak to others whom they don't know unless there is an event, an experience that serves as a common ground and source for the first comment. Just as the adventure of the river provides some of this common ground, the architecture of the lodge can continue the momentum by providing places and events that will encourage people to be themselves. In doing this, the lodge will retain a certain denseness of people more like the urban condition combined with a certain physical openness more like the rural condition.
This means that the middle spaces between public and private domains will be emphasized -- room-sized places (but probably not room-like) for informal gatherings, chance encounters, or for enjoying the sun and view. These places become social occasions, working in much the same way as do the rapids on the river. In approaching a dangerous rapid, it is common practice to scout what's ahead. People convene along the banks of the river to familiarize themselves with the preferred routes and some of the possible consequences of the less-than-preferred routes. These gatherings are a bit more tense than the ones after the rapid has been negotiated. Here, stopping to catch a breath, dump the water out of the boats (and ears), and watch the kayaks and canoes surf in the waves, the excitement and exhilaration of the river carries into conversation, breaking people from their complacency, helping dissolve the usual social barriers. These rapids are real places along the river, with names like Whirlpool, Jawbone, or Slingshot, each with its own peculiar personality. The middle-spaces of the lodge are intended to have some of this quality of event and place -- places where one might get to know a neighbor, providing the option of participation in collective activity. This atmosphere will allow the community spirit that is so much a part of the lifestyle of the people who work at NOC, to be shared with their guests, not just in services but in a real sense of belonging to a place.

In thinking about what this resort should be, I've had one reference in mind all along: the Chaco Indians of New Mexico (800-1100 A.D.). The area in which they lived is quite dry, with the sandy soil swallowing any moisture that falls -- not enough to sustain life. But by locating their fields and villages at the base of large slickrock outcroppings, they could use the rocks as collectors of water, small groves guiding the water across the rocks in ever-increasing volume, eventually cascading to the village below and subsequently shepherded into fields. As rain began to fall, the Chaco Indians would hasten to positions near the source of water and open small gates to flood each field individually, assuring maximum use from each storm. It is this kind of closeness and celebration of people and their environment that I would like to see at NOC (which is also a place where people's livelihood depends on the rains).
Due to dramatic increases in the popularity of white water recreation, the use of current facilities is strained to the limit. In addition, increases in the cost of gasoline are making it too expensive to drive to NOC for only one day, resulting in greater demand for lodging. (Once arriving, people are wanting to stay longer.) It is also hoped that new facilities will enhance usage in the winter months as a place for small conferences and conventions. (Atlanta is a four-hour drive, Knoxville two.) The following program projections are directed to help meet these needs:

- restaurant (100 seats)
- Great Space/meeting room (all-purpose room for meetings, music, films, dancing)
- library/reading room (den-like, away from traffic)
- recreation hall and crafts center (ping pong, pool, cards, arts and crafts)
- day care center and playground
- outfitters store (small, only to complement existing store across the river)
- guest accommodations
  - camping platforms (open-air platforms with roofs)
  - rustic cabins (a built tent)
  - not-so-rustic cabins (more houselike, kitchens included)
  - rooms with shared bath
  - rooms with private baths
- parking

How much of this program becomes collected as "the lodge" and how much is remote is derived from considerations of quality and siting. Most of my design efforts will be concentrated on the lodge structure.
Someone is watching you.

To win for you with love and faithfulness, you must be the first to give a very great excess.

The community adores the trust you seek to shed these.

You are honest, frank.

Time is the wisest counselor.

Put your trust in those who are worthy, if you can find any.

You will not find love at first sight.

You are very fortunate in love.

You will be happy in your home life.

You will have a lot of people to counsel you, and you will be happy in your life.

You should be able to find a husband, and you should have a lot of people to counsel you.

Patience is a form of egoism, and to condemn egoism is to share it.
A study of change and constancy (not predicting the future)

In looking at the site, there are two general areas in which the lodge might be placed: adjacent to the river, or more in association with the mountain behind. The experience of the Smokies is one that involves big chunks of sky and large distances. This more open experience of the landscape is in complement to the more intimate experience of the river, where one rarely sees beyond the next bend or through the trees overhead and along the bank. This is especially true in the Gorge of the Nantahala River, known to the Cherokees as the "Land of the Noonday Sun," where the walls of the Gorge rise steeply almost from the river bed, obscuring the sun until noonday and keeping one from seeing out (people have a tendency to keep their eyes on the river anyway). The site for the lodge should be away from the river, open to the sky and light, and the larger orienting and unifying dimension of the landscape.
Placing the lodge at the uphill edge of a large existing clearing grants a view out (no trees), and establishes the building as a part of both the clearing and the forest, allowing the landscape to contribute to a limited pallet of materials. The clearing now becomes a unifying and orienting space providing the primary continuity, allowing the character of construction to change from one structure to the next, one year to the next, reflecting current attitude. In this fashion, each structure is free to assert its independence in support of its intent while still maintaining a sense of unity and belonging through the strength of the landscape and its complementary relation to it.

In addition, the clearing provides important and ready-made amenities directly in terms of use. Its relative flatness connotes possible use for outdoor activities such as volleyball or other yard games, location of a swimming pool, a garden to provide vegetables for the restaurant, or an amphitheatre for larger gatherings: music, theatre, or instruction.
The lodge's siting at the clearing rather than higher on the mountain has other advantages:

- less intense slope; the planning of volume is less directed by the contour below; transportation of materials to and from the site is easier as is construction and maintenance of roads, parking, and buildings.

- there will be less traffic and maintenance of the steeper portion of the road.

- the lodge can be established in a central position to both old and new.

- the lodge is not too far removed from the river, enabling people to walk easily from river to lodge.

- the lodge will still be visible from the highway when leaves drop from the trees.

- the view is close to that which is available 100' higher, and requires many less trees to be felled.
THE ROAD AND PARKING

In planning for future growth, one need not decide precisely what everything is and where it goes, but rather, one allows for the possibility of growth and flexibility by assuring that options are maintained. The first move is the most important and is usually related to movement; in this case, it is the new road. The road is placed in relation to the mountains and trees so as to preserve as many different choices and site characteristics as possible. This becomes a kind of master plan without the stigma of pinpointing uses, but only suggesting them. This new road is to provide automobile access not only to the lodge, but to the rest of the site above as well. Placing the road and parking above the clearing begins to establish a zone of variable dimension between the edge of the clearing and the road, which is at times wide enough for a single building while at others is able to accommodate several layers of building. The upper site is composed of two gently rounded ridges separated by a 15-20' deep ravine. The ravine carries some water during storms and is characterized by concentrations of exposed rock and fallen trees. Where the ravine and the south ridge collide, a steep contour results. It is here, at the base of this steep contour, that the road finds a home, pushing across the ravine where it is nearly level, maximizing the dimension (but not too much) between the road and the clearing, much of which is still reasonably sloped. The qualities of ravine, slope, and trees combine to distinguish an inside place along the road in contrast to the openness of the clearing and the ridge above. From here, the road continues up the mountain, switchbacking up the northern ridge, leaving the southern ridge with its better view and south light free of thoroughfare and open for development as the need arises. This southern ridge is accessed through level feeder roads from the climbing road, the change of slope from climbing to level indicating local traffic and providing ease of maneuverability in parking and turning around.

Due to the increased density of contour, buildings on the upper portion of the site will be quite different from those below, fewer options being available. The destination of the road is a fairly large and reasonably
flat shoulder with an incredible view, about 3/4 mile from and 500' above the river. The road ends here, leaving the bowl beyond to be developed as a natural place for hiking and picnicking. The highest point on the property, Wesser Promontory, features a 360° view and might be used for viewing the sunset (since it is blocked from below), possibly using torches or flashlights to guide supervised outings safely down the mountain after dark. Also, the road and structures are not allowed to be placed close to Flint Ridge. This ridge, forming the southern edge of NOC property, continues down the mountain until it confronts the river, creating its most exciting rapid. The rush of white water and the shouts of rafters can be heard from below. A similar ridge springing from the river ascends the opposite side of the Gorge, culminating in a large rock outcropping. Similar outcroppings are common on the NOC side, thinning the trees and providing numerous convenient and comfortable ledges on which to sit. These opposing ridges form a place, a gateway to the Gorge: to the south, the steep walls of the Gorge rise dramatically from the river; to the north, they soften and relent, revealing the hint of distant vistas.
THE RESTAURANT

The first piece of the lodge to be built is the restaurant; here lies the greatest need. The kitchen, being the most solid and utility-dependent, is sited close to the road with vehicular access at the north side. Guest access and the restaurant itself lie to the south. Placing the restaurant here, in a center position relative to the clearing, begins to suggest a number of other building sites -- to either side (north or south) as well as into the clearing -- and ensures that the lodge will be in an active position in relation to future building. The access road gently descends from slightly above the restaurant, focusing on a greenhouse-like form, signalling the entrance sequence. Parking is burrowed into the mountain so that cars, when parked, become parts of the mountain, minimizing their visual impact from above. A footpath connects the parking and upper portion of the site with the restaurant moving from a position behind to alongside the building, revealing the clearing and view before entering. A second footpath, for those parking below, skirts along the edge of the clearing, swinging into the open and parallel to the contour as it nears its destination. The visibility of the path in the clearing suggests the river and beyond.

The restaurant is broken into three tiers, descending with the hill underneath, each 2½' below the one above. This downward displacement directs one's attention to the clearing outside, while the lateral displacement (left to right) begins to indicate movement in the direction of the contour. Together, both establish diagonal views and break up the area of the restaurant into room-sized pieces while retaining their participation within the whole. Entering at the middle tier allows arrival to a center position and the option to move either up or down.
The walls of the kitchen are also displaced laterally, providing access at either end in a direction perpendicular to that of circulation in the restaurant itself. The form of this first structure is simple and barn-like, assisting in ease of erection and establishing a large dimension and volume that are significant in relation to the dimension of the clearing. The upstairs contains a single width of rooms (six rooms with private baths) reached by stairs at either end of the structure. These rooms need not be finished at the time of first construction. In section, the building settles into the mountain to look out over the clearing to east light and the view beyond. The sloped roofs lend a sense of being "in the roof" and create story-and-a-half spaces for sleeping lofts under dormer windows.

The shed form at the downhill edge of the building is treated as a porch -- not enclosed but only screened. It can be easily closed off in winter, drawing the restaurant in around the wood stove. The masonry walls behind the stove are intended to store heat from both the wood stove and the ovens in the kitchen.
MORE LODGING

The first out-building

This building (10 rooms with private baths) is placed along the edge of the clearing adjacent to the restaurant to aid in establishing the lodge as an active and central place. Sited at 45° to the restaurant, following a change in direction of contour, it begins to define an outdoor space between itself and the restaurant. The height of the structure is held to one story close to the restaurant, granting a view out to a future, more vertical, structure behind and slightly above. The break in the form of the building connects the uphill and downhill sides, the clearing, and the woods, making the building permeable similar to the original wooded edge of the clearing. This break becomes an event along the path, a middle space in a significant location, visible as either an extension of the clearing or an extension of the woods.

ADDITIONS TO THE RESTAURANT

As the amount of lodging increases, the restaurant expands via two porch-like projections into the clearing. These additions continue the pattern intimated in the original restaurant: the first and most dominant form is in sympathy with the contour, while subsequent additions complement and intensify this form running in a perpendicular direction. The largest of these additions splits into two levels as it reaches the edge of the clearing, forming two semi-private rooms. These rooms can be used as regular dining, clinic or staff dining, or as meeting rooms, and have ample headroom underneath for outdoor dining -- barbeques and picnics.

A second floor is also added above a portion of the entrance porch as either more outdoor dining or more lodging (three rooms are possible).
Model views of the first out-building.
THE STRUCTURE

Because this is a self-help project relying as little as possible on outside help, and also because of inadequate access (only a five-ton bridge across the river), an abundance of nice trees, and few level places from which to work, the use of cranes or other large machinery is not desirable. All components of the building system are to be lifted into place by hand, limiting the weight of any one piece to around 200 pounds or less. The structural system is a hybrid pole structure employing one-way post and beam construction with stud wall infill and concrete pier foundations (sono-tubes). The post and beam frame is comprised of standard sized lumber secured with threaded rods. The beams run in the direction of the contour below, and roughly parallel to the edge of the clearing, layering the structure in much the same way as the surrounding woods. Joists tie the beams together in the opposite direction. At the roof, beams and joists reverse direction, lending added stability. Beams are double and their spans held to twelve feet to help reduce the weight of each member and keep them to standard sizes. Joists are, on average, fourteen feet in length with an optional four foot cantilever. The use of the frame allows the structure and roof to go up in a hurry, allowing several crews to work on different parts of the building at once. The frame also adds to the ease of future alterations by collecting bearing walls at points, increasing options. Concrete piers are used over conventional continuous footings because they leave a greater portion of soil undisturbed and do not require drainage patterns to be completely redirected. They also require less concrete and lighter formwork. A masonry key wall at the uphill side of each structure resists downhill slippage and, in working integrally with the first floor level, resists lateral shear due to wind. This simplifies the frame above by reducing the amount of necessary crossbracing. Also, since the concrete piers are no longer required to resist downhill slippage, they need not be buried as deep. These key walls become "thicker" in places to protect plumbing from the weather in its transfer from building to ground.
The last major piece to become a part of the lodge is the Great Space. It is placed diagonally to the restaurant, making it possible to use the Great Space as an extension of the restaurant and vice versa. At Thanksgiving or on the 4th of July, large banquet tables could be set in the Great Space; or, for large gatherings such as movies or dancing, tables could be removed from a portion of the restaurant, granting extra room. To create the volume of the Great Space, the existing entrance porch is extended both horizontally and vertically.

The section opens to south light, allowing rooms at the top to function as solar attics in the winter and lodging in the summer. In making these extensions, parts of roof become indoor elements enabling one to walk through a roof valley circulating between rooms. The entrance trellis becomes a small area with a fireplace overlooking the Great Space.

Part of the restaurant nearest the entrance is converted to a small outfitters store and reception/administration area. The tables lost here are placed along the north edge of the Great Space, contributing an active edge (this porch area can also be closed off in winter).
The diagram of the restaurant on the first floor and the lodging on the second are now both 'L' shapes with the Great Space occurring more or less between the legs of the two 'L's:

![Diagram of restaurant and lodging]

Large garage doors opening onto the outdoor deck dissolve the feeling of enclosure and, combined with the ceiling plane of the rooms above, give the southeast corner a feeling of horizontal extension. The opposite corner, without the extension of the deck and the rooms above, is more vertical and open, drawing in the view of the clearing and beyond. The day care center and recreation room are placed beneath the Great Space at ground level in closest association with the clearing and the out-of-doors. Neither the day care center nor the guest rooms above need be finished at the time of first construction.

Additional rooms are added not only above the Great Space, but to the north end of the lodge as well. Here, the interior access of the existing structure shifts to the downhill and outdoor edge of the new, and extends to join with the adjacent (to be) structure. This shift of the access is emphasized and enlarged to become another middle space, a place to linger.
Sketch of second floor.
EVEN MORE LODGING

Further out-buildings

In this projection, two more structures remain to be built (not including the upper site), neither of which front directly on the clearing. The first, to the north of the Great Space, is vertical in organization, looking out over the building below. Its position adds another edge to the already partially defined outdoor space between itself and the Great Space. This outdoor space is similar in dimension to the Great Space. A second space is created at the south side of the new building, and serves as the location of another middle space, joined to the clearing via the break in the building below.

The last structure lies to the south of the lodge proper, and is completely within the trees. It is shifted toward the clearing to avoid the shadow of the lodge. Some thinning of the woods between itself and the clearing permits veiled views out through tree trunks at ground level or through leaves and branches above.
A word or two on integration

The structures that convene to form the lodge at NOC are similar to a more urban situation in that it is not always possible nor desirable to extensively renovate or change existing structures in an effort to integrate them with the new. If an assemblage of buildings is to be more than merely a concatenation of independent structures, we must look to sources other than renovation and change for unifying factors. The growth process is one of constancy as well as change, with elements that are constant and continuous being the more difficult to achieve and simultaneously the more important -- providing integration over time. The following is intended to summarize these integrating continuities and to relate them more directly to the architecture.

The most important of these integrating factors is the relationship of each structure to the landscape in general and the clearing in specific. The middle spaces (mentioned earlier) are placed adjacent to circulation and represent areas where the path "intersects" the out-of-doors. These spaces distinguish themselves from nearby private and public areas via level changes, moving nearer the earth and projecting into the clearing. This provides an explicit relationship to the clearing for each building, beginning a system of porches, decks, and shed extensions onto the larger volumes that dimensionally relates building to ground and building to building. These elements are most continuous at lower levels allowing each major volume to read through above.

These middle spaces are also entrances and ways through; it is possible to walk along, under, and through all of these buildings, preserving the permeable quality of the original clearing edge. Additionally, the structure of each building runs parallel to the edge of the clearing, layering each in a similar fashion to the surrounding woods -- one looks through the structure to the clearing and view beyond.
The contours, beams, and key walls* set up a reference system from which perpendicular extensions register to project into the clearing. These extensions create a rhythm of built and unbuilt spaces in complement to the more continuous building behind with the inflection of the pitched roofs uniting them in a wave-like fashion:

In turning their planar and more wall-like gable ends toward the clearing, these extensions complement the non-planar qualities of the encircling trees and provide a public and welcoming countenance.

Each new building is not singular in program, providing continuity of use between structures. The restaurant contains both lodging and places to eat, while the Great Space includes both of these and an assortment of public rooms as well. Structures that are composed primarily of lodging, still include collective gestures.

In the growth process, the first buildings constructed become the context for those to follow, containing the seeds of future growth. The territories that will become buildings, and the qualities that establish them, must to some extent already exist with the erection of the first structure. This manifests itself in planning new buildings as extensions of existing elements; structure, floors, and roofs, resulting in dimensional similarities between the pieces. Or as extensions of existing qualities; in adding the Great Space, the notion of porch at the entrance as well as the view is maintained from

* (The key walls provide a similar kind of continuity in plan as the porches and decks in elevation.)
before. In this way, although the physical definitions change, it can seems as if still the same place.

In concluding, what is important here is not the specific forms that the structures have assumed, but their organizations and the relations and dimensions they assemble. This is intended to be a general description, not to be built literally. Another projection, with different information, perhaps that of next year, could be quite different. But the quality of organization, it is hoped, should be strong enough to carry the differences.
Mohonk Mountain House, New Paltz, New York.

Trees on slope.

Cy Jones House, Sandy Mush, North Carolina (1890).
Tobacco barn, Sandy Mush, North Carolina.
Saltair - on the Great Salt Lake, Utah (destroyed by fire 1925)
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8. Rainer Maria Rilke, from *Genius Loci*, p. 48.


11. Yanagi, p. 137.

12. Yanagi, p. 121.


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