

# ECOLOGY, AESTHETICS and DESIGN

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## OPEN CONTACT: PHENOMENAL EXPERIENCE AND "NATURAL" PROCESSES

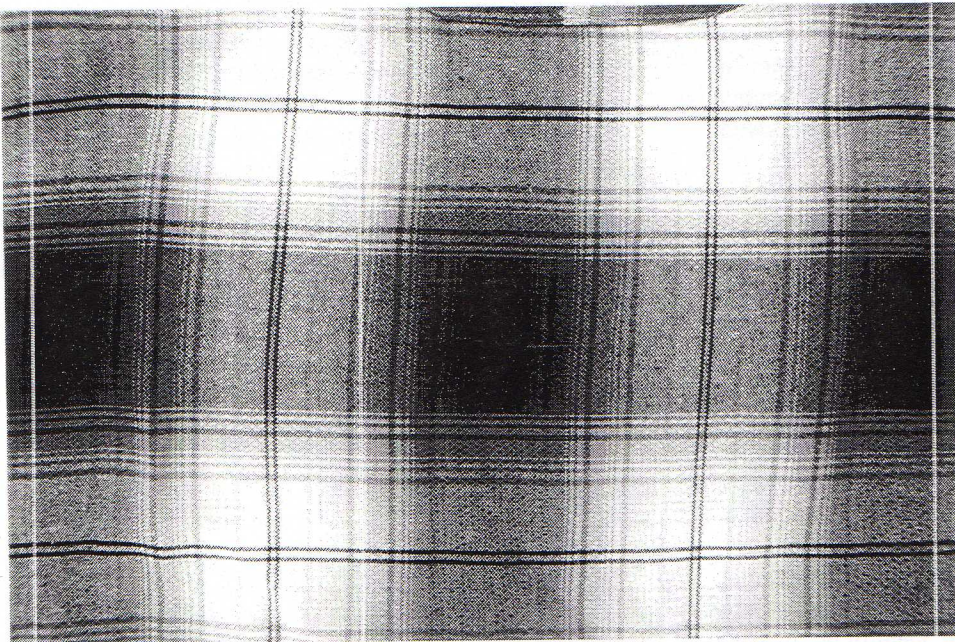
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*In a life that is truly life, everything overlaps and merges.*

*John Dewey*

*Art as Experience*

### "NATURE" AND EXPERIENCE



*A Plaid*

In considering the aesthetics of ecological design, the crux of the problem lies in how people can experience the relationships and mutual dependence between contemporary life and a world of natural processes. It is by experiencing our relationship with natural processes that they can be opened to interpretation and understanding. This essay does not hold up a picture of what an ecologically designed landscape should look like. Rather, it presents a theoretical and historical argument for what ecological design needs to achieve in terms of human experience. The articulation of this experience is what gives rise to that which we call aesthetic.

As a starting point it is important to recognize that human life is part of the woven fabric of natural processes. Rather than distinguishing a human process from a natural process, it is more useful to consider how the works of humankind are embedded in that which is natural. Even highly technical processes are embedded, in and hence part

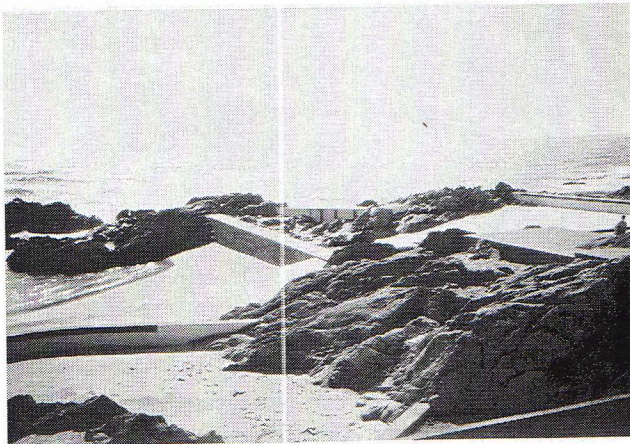
of, natural processes. The science of ecology investigates these deeply woven interrelationships. The popular notion of ecology, however, assumes a distinction or even separation between what is human and what is natural. In order to understand ecological problems, they should not be viewed as something out there in the world -- separate from us. Ecological problems are problems within the relationships between human and other natural processes.

The built environment has always been embedded in natural processes. In pre-industrial societies, the vernacular landscape comprised an infrastructure in which people consumed resources at the scale of the individual. Much of the day would be spent harnessing natural resources to provide food, water, and shelter. There was a physical, tactile *experience* connected to these activities -- to heating one's home, to fetching and carrying water.

The Functionalist agenda originally referred to this straightforward way of making places, but it later came to profess that buildings should display their technological workings. The Pompidou Center in Paris by Piano and Rogers (1972-77) conspicuously exposes its entire mechanical and structural systems. From this example, one could consider designing landscapes that conspicuously display the workings of natural processes.

The failure of modernism, of course, is that many of the places it created are lacking in experiential quality. The economy of means afforded by mass production often led to the creation of places devoid of human scale and human feeling, and therefore *closed* to human experience and interpretation. Today, ironically, as a result of abandoning experiential quality, modernist design does operate on the level of imagery -- an image associated with being devoid of experiential quality. The missed opportunity here is not just that modernism abandoned the important role of experiential quality in the built environment, but also that it never pursued this quality as it relates to our relationship with natural processes. This is the uncompleted project of modernism -- to provide for a rich human experience of the workings of the world. The pursuit of this experience should have a central place in ecological design.

## PHENOMENAL EXPERIENCE



*Piscina de Mar, Leça da Palmeira, Portugal, 1961-62, Architect Alvaro Siza*

### The Quality Without a Name

The crucial ingredient in environmental design is experiential quality, not just the imagery associated with qualities. In phenomenal experience, what is most important are the qualities of phenomena. From the standpoint of ecological design, experience needs to be

woven into the phenomenal qualities of 1) our relationship with natural resources, 2) the phenomena inherent to a specific site, and 3) the patterns of human inhabitation.

The first agenda, that of experiencing the phenomena of natural resources, was explored in the 1960s and 70s by the artist Robert Smithson. Smithson was fascinated with the material qualities of resource consumption, and by the "natural" tendency of people to exploit and alter environments. Particularly, in projects like *Spiral Jetty* (1970), Smithson explored the phenomenal qualities of geologic exploitation and displacement as found in mining operations or road construction. Smithson was acutely aware that we live in a world of displaced matter. All things that are man-made involve the extraction, transportation, and reconfiguration of matter. This is a simple fact of our relationship with natural resources. The phenomenal qualities of this relationship formed the subject of Smithson's art.<sup>1</sup>

The subject of Robert Irwin's art is the phenomenal experience of a specific site. In one of his best known works, *Two Running Violet V Forms* (1983), Irwin placed an irregular fence made of blue mesh supported by aluminum poles within an existing eucalyptus grove. Rather than standing as a figure in the grove, the fence expands one's perception of sensual qualities of the grove -- the domain of floor, canopy, and sky, the pattern of trunks and topography, the light and color filtering through leaves -- such that the grove can be experienced within a realm of sensory and spatial relationships. Irwin de-emphasizes the objective and representational elements of aesthetic experience, making the subtleties of the ambient environment, and our perception of them, the subject of his work.<sup>2</sup>

Phenomenal experience is this mode of perception. It is something felt as well as thought; something characterized not just by sensing, but by being. One feels it, for instance, when gazing at flames in the fireplace on a cold winter day. The qualities of the fire are somewhat mesmerizing, but one would be hard-pressed to name these qualities.

This existential dimension of environmental design, this "quality without a name," is a central idea of the architect Christopher Alexander as developed in his work and theoretical writings.<sup>3</sup> In the creation of inhabitable places, Alexander always pursues this quality. Primarily, Alexander finds it in traditional built environments and in the everyday craft of traditional societies. There he finds a rich materiality and experiential quality -- one independent of any representational reading. He argues that things made in an unselfconscious way allow the maker to be highly aware of experiential

qualities. Most importantly, Alexander emphasizes not just the material qualities of a particular process or site, but the experiential qualities of everyday inhabitation.

A common criticism is that Alexander's architecture, like much historicist Post-modern architecture, bears resemblance to traditional vernacular architecture. Alexander's buildings appear picturesque, conjuring up images of quaint villages. Seen as such, one cannot avoid making associations with architecture of the past, "reading" the work for its representational qualities rather than experiencing it for its phenomenal qualities.

Phenomenal experience, however, can never be completely separated from representational associations; the things found in a phenomenal experience can always be associated with particular meanings. But, it is the phenomenal qualities of experience, rather than representational qualities, that engage people in a more direct contact with the environment.

As a goal in ecological design, phenomenal experience needs to focus on the qualities of inhabitation, of site, and of our relationship to resources. By emphasizing experience over image, one's contact with environmental conditions is more direct. By articulating this contact through design, our relationship to natural resources and natural processes can be opened to individual experience. Landscape architecture, therefore, should create places of contact where natural relationships are not explained as a singular message but instead are opened up to multiple experiences and interpretations. As argued by the American philosopher John Dewey, learning and comprehension may be assisted by the study of information, but most of all, they must be grounded in personal experience.<sup>4</sup>

### A Sea Wall

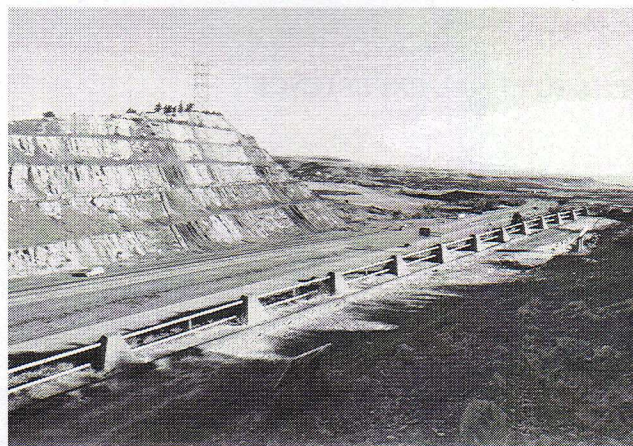
On the coast of Portugal, north of Porto, a high retaining wall protects the town of Leça da Palmeira from the forces of turbulent ocean waves. As a system of infrastructure, this wall both separates urban life from the natural process of the tides and connects the two together.

Along the sea wall is a public pool house (Piscina de Mar, 1961-62), which allows bathers safe access to ocean waters along a dangerous rocky shore.<sup>5</sup> In designing this pool house, the Portuguese architect Alvaro Siza has provided for the phenomenal experience of the ocean in its relation to the infrastructure of the sea wall. Within the wall Siza has inserted changing rooms and a ramp. Descending this ramp one soon emerges at a platform among the jagged rocks below. The walls of the ramp and changing rooms are heavy and massive to withstand the storms. Slightly angled and skewed, the walls make one

wonder about the power of the waves. Heading out from the platform are low, thick concrete walls on which one can walk. Each wall is also a path, and a bench. These "walls" lead bathers out among the rocks and into the tidal zone. Some of them enclose bathing pools. When the tides rise it becomes difficult to reach safe waters. But as the tides recede the pools remain filled with ocean water -- inhabitable traces of ebb and flow.

Through a very minimal language of design, Siza has transformed the infrastructure of a concrete seawall into an armature for phenomenal experience. Formerly a barrier, the walls' utilitarian meaning has been opened to other experiences and interpretations.<sup>6</sup> As the walls diverge and lead bathers out into the tidal zone, they create opportunities for people to inhabit this natural process. It is in the careful placement of these walls that the inhabitation of the tidal zone becomes a phenomenal experience. When people go swimming, they will know which way the tides are heading.

### OPEN INTERPRETATION



*Point of Geologic Interest, Interstate 70, Morrison, Colorado*

### The Play of Relationships

Perhaps the most significant attribute of an experience is that its meaning or interpretation is not specified beforehand. When one thinks "*that was an experience*," one is reflecting on the directness of the qualities of an experience rather than its meaning or interpretation. Experience is a very open condition -- open to individual interpretation.

Open interpretation has been a recurrent topic in contemporary philosophy as well as a central concern of Deconstructivist architecture. A world that is "open" allows for endless interpretation. It locates truth within the individual. A world that is "closed," on the other hand,

fixes truth as something outside the individual. This truth is seen as oppressive, and as a limit on the freedom of individuals.<sup>7</sup>

It is from this position that Deconstructivist architects mounted their attack on the neo-traditionalist aesthetic of Post-modernist architecture. In reaction against a representational architecture that communicates specific messages, Deconstructivists have sought a non-representational architecture that is open to multiple interpretations. If Post-modern architecture depicts an idealized world that is "whole" -- that contains within it an ideal order of things -- then Deconstructivists strive to create a world that has "holes" -- for escape from this order. There is never one correct order of things, but rather, all things are complex and are engaged in multi-valent relationships. As a design strategy, therefore, Deconstructivism should seek to reveal the complexity of things and the multi-valency of relationships so that these can be experienced and interpreted.

In practice, however, Deconstructivist architecture has fallen short of its own rhetoric. It has succumbed to creating images of a multi-valent world rather than revealing the multi-valences inherent in the world. This is in contrast to Deconstruction, the philosophy that inspired Deconstructivist architecture. Deconstruction promotes the free play of interpretation not just of a building, but of the world in general. This open interpretation enfranchises individuals to give meaning to their experiences, thus calling forth a more critical understanding of all phenomena.

Another door that was opened by the philosophy of Deconstruction was toward a way of looking at all phenomena not just in terms of things, or in terms of an order, but in terms of the many *relationships* that are at work constituting this order while at the same time changing it. Relationships, perhaps, are what gives rise to things. One could consider all things as being constituted by these relationships. In order to comprehend phenomena, one might do best to forget about things and concentrate on relationships.<sup>8</sup>

As relationships are not static, they are also not subject to singular, correct descriptions. Phenomena in the world are inherently multi-valent, consisting of multiple and changing relationships. Natural relationships are a case in point. One can read such relationships from left to right, but also from right to left. Their "true" description is open -- open to interpretation. This multiplicity or multi-valency is not of a world coming apart at the seams as depicted by Deconstructivist architects. Things are merely complex, and complex not in their order, but rather in their relationships.

This is the direction developed by the French philosophers Gilles Deleuze and Félix Guattari, who have written extensively on this subject in the wake of Deconstruction.<sup>9</sup> In poetic essays they employ tactile metaphors like quilting, weaving, stratification, and folding to describe how relationships give rise to all phenomena -- be they mineral, vegetable, or political. Their way of writing examines relationships from different ends, and interprets the mutual dependence of things from different sides. This process of interpretation arrives at no single conclusion. It is an open process, one of open interpretation.

What this implies, as a strategy for ecological design, is that our relationships to natural processes should be revealed in a way that opens them to interpretation. The woven structure of human inhabitation and natural processes can involve places of contact between the two. Here their interrelationship can be interpreted by individuals -- interpreted personally, and interpreted critically.

#### A Road Cut

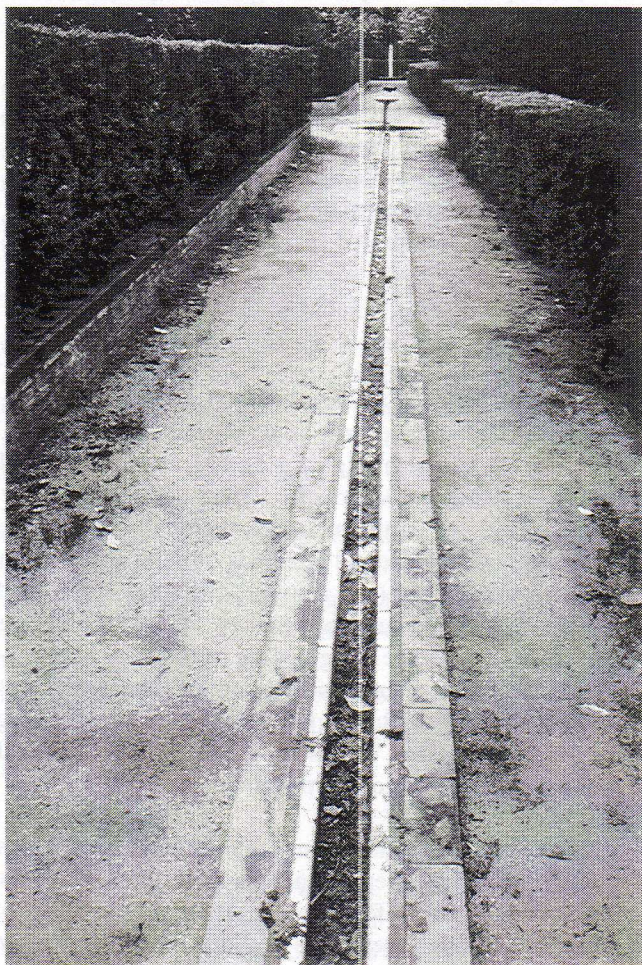
Just west of Denver, Colorado, at the point where the Rocky Mountains rise out of the Great Plains, Interstate 70 slices through a ridge of tilted geological strata -- accumulated layers of a former ocean floor. The colored bands of earth run nearly vertically across the entire road cut, and extend hundreds of vertical feet from ridge top to road bed (and below). The sides of the road cut are terraced to prevent erosion. On one of these terraces is a path. The design of the path is very simple -- a walking surface, a curb, and a guardrail. No spectacle is made of its design. But by the very simple act of giving the terrace a program, of making it a public place, natural processes are opened to interpretation.

As one walks along the terrace, one walks through geologic time -- hundreds of millions of years. Through the time of dinosaurs, through the time of mammals, through wet times and dry times. Since the layers are parallel, they must once have lain flat. What lifted them up? The mountains lie just to the west. Ever so slowly, the uppermost exposed edge of these layers is eroding away. The exposed surface of the road cut is eroding even faster. In addition, due to the high and exposed position of the terrace, there is no shelter, no where to hide from the forces of climate and weather. One feels oneself *in* the atmosphere.

Here, the geological foundations of the region, and the ongoing processes of weathering, are opened to public experience and personal interpretation. There are also other processes to interpret. The massive act of road

building has redistributed the removed earth out across the valley below as Interstate 70 heads east, to places like Kansas City and Pittsburgh. This juxtaposition between geological time and human time, and between nature and infrastructure, provokes thought about our society, its attitude toward land and toward resources. Through the addition of a simple path, the road cut has become an experience -- one that opens natural processes, and our relationship to them, to interpretation.

## OPEN CONTACT



*Strands: Walking Path and Water Channel, Seville, Spain*

## Weaving a Plaid

A diagram of the contacts between people and natural processes could be the simple fabric mentioned earlier. Strands of thread running parallel make contact along their entire length, while strands running perpendicular make contact at discrete points. It is their entwined relationship -- the contacts between threads -- that creates a larger whole. If this fabric were a plaid, bands of colored threads would cross each other to create new colors. Fields of other color would be enclosed in between. And as one looks across this plaid, all the

different colors can be found embedded in one another. This integration creates the strength and beauty of the plaid.

Now picture this plaid as a landscape. Certain bands could represent a stream or a watershed, a highway or a power line, an allée of trees. Areas in between the bands might be neighborhoods, corn fields, diverse habitats, or a parking lot. Throughout the landscape would be bands of infrastructure. To increase the contact between the different bands in a plaid one could tighten the weave, squeezing more strands closer together. Or one could diversify the weave, adding more kinds of colors, sewing them across each other. It is by diversifying and tightening the threads of human inhabitation, that more contacts can be made, more relationships revealed. Weaving a plaid, therefore, describes a method for the design of ecological landscapes.

The first step of this method is to identify the strands into which one will weave. These would be the strands of natural processes, and in particular those natural processes which contain embedded within them human processes. An ecologically designed landscape clearly would involve both. In fact, one would be hard pressed to find any landscape that does not contain evidence of both. In the example of the road cut, natural processes included those of geology and the atmosphere. Human processes were those associated with the highway. In the example of the sea wall, natural processes included the action of the surf beating against the shore, and the tides rising and falling. Human processes included the protection of the city from these tides, as well as the culture of swimming in the ocean.

In any landscape, one can find evidence of this relationship between humankind and nature. Its traces are usually found in the ways people build. The highway and the sea wall are such traces. Sometimes these traces are much more subtle -- a change in grade between two wheat fields could be the site of an old irrigation ditch. Often these traces are very explicit -- a strip mine or a military testing ground. The reclamation of such a damaged site, as well as the discovery of subtle traces in the landscape, provide opportunities to weave human inhabitation into the fabric of natural relationships.

These bands of contact between human and natural processes should provide clues to what kind of inhabitation can occur, and where. This is the second step of the design process -- that of programming -- identifying what new strands one is going to weave into the fabric. As in the darning of a sock, new strands must be chosen for the job. These new strands involve human activity. Walking, pausing, and looking are obvious activities to program into the road cut. Swimming is a likely activity

for the ocean shore, as is sitting, or lying down. But on a more specific level, one should pay special attention to circumstantial conditions -- particular incidents where natural relationships reveal themselves in particular ways, implying particular activities, particular modes of being. The low walls at the pool house, for instance, are carefully placed to capture water in little bathing pools among the natural alcoves of the rocks.

It is the design of these specific places, for walking or lying down, that involves a tightening of the weave. As a third step in the design process, the development of this scale of design can articulate human inhabitation such that the subtleties of a human activity are aligned with the circumstantial subtleties of a site, opening the qualities of both to experience. Circumstantial qualities might be the texture of rocks, the splash of the waves in certain spot, the weathering of an old sea wall. If one is solving an ecological problem through design, there are circumstantial qualities of this solution; specific materials, specific conditions, specific processes, as well as all the circumstantial qualities of the site -- its natural history, its human history. The exacting challenge in ecological design is how to articulate these circumstantial conditions as *an experience*, in such a way that the interrelationships between humankind and nature are opened to interpretation.

## CONCLUSION

The contemporary notion of ecological design does not stress the importance of human experience. It focuses primarily on the solving of ecological problems -- problems generally created by a collision between "culture" and "nature." But these problems exist within ourselves, within our personal relationship to natural processes, and our comprehension of this relationship. To give meaning to these relationships, to comprehend them, they must first be experienced. Articulating experience is the *raison d'être* of design. It is therefore unnecessary to call out ecological design as being somehow different, by giving it a "look," or an aesthetic. What is important is to enfranchise individuals so that they can experience their relationship to nature. Open contact and phenomenal experience, within the intricate fabric of natural processes, can empower individuals to critically interpret, and tighten, the weave.

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