A SMALL MUSEUM ABOUT THE IROQUOIS INDIAN

by

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A Small Museum About the Iroquois Indian

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Abstract

This is a study about learning and doing through the interpretation and use of design references: how to take a reference (a building, an image, some text) and learn from it. It is necessary to understand about how the reference is generated (what makes it what it is) and to understand which attributes make it useful because then the new information can be used to do something else.

This volume includes study and implementation of design references from all of the above categories. The work is in the form of analytical sketches and design projections of a museum for the Iroquois Indian.

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We went to William and Mary and it was there that I began to talk to them about everything. I told them what was the use of their being young if they had the same opinions as all of them who were eighty and a hundred then what was the use. Somebody has to have an individual feeling and it might be a Californian or a Virginian. It was a Californian, I can call myself a Californian because I was there from six to seventeen and a Virginian might have an individual feeling, California and Virginia have at one time had a feeling that they were not part just being American, when Alice Toklas a Californian and Pat Bruce a Virginian used to talk about what was American I always said that Richmond and San Francisco did not make anybody know what was American, it was just Virginia and California and is California that now no not now and Virginia well I told them that there was no use in being young if they had the opinions and they did have them of what Virginia had been. What was the use. And that is all there is about it, it looks as if it might commence and it never does begin and like General Lee they lead themselves to a predestined defeat and knowing it, if they did not know it then it would be a forlorn hope but they know it and so what is the use of their being young, there is none.
Introduction

Though most of the studies in this volume are manifest in the ensuing design projections, it is harder to identify the affect which passages from text have had on the work. I have not even tried to identify the affects of either text or some of the images, but I am confident that they are there. When we work with anything as a reference the process must involve understanding the reference as it relates to us: we have no minds but our own. It is the personalization of the impersonal which Antoine de Saint Exupéry addresses in the following passages:

"Are you looking for chickens?"
"No," said the little prince. "I am looking for friends. What does that mean--'tame'?"
"It is an act too often neglected," said the fox. "It means to establish ties."
"To establish ties?"
"Just that," said the fox. "To me, you are still nothing more than a little boy who is just like a hundred thousand other little boys. And I have no need of you. And you, on your part, have no need of me. To you, I am nothing more than a fox like a hundred thousand other foxes. But if you tame me, then we shall need each other. To me, you will be unique in all the world. To you, I shall be unique in all the world..."
"I am beginning to understand," said the little prince. "There is a flower... I think that she has tamed me..."

"Please--tame me!" he said.
"I want to, very much," the little prince replied. "But I have not much time. I have friends to discover, and a great many things to understand."
"One only understands the things that one tames," said the fox. "Men have no more time to understand anything. They buy things all ready made at the shops. But there is no shop anywhere
archy interviews a pharaoh

boss i went
and interviewed the mummy
of the egyptian pharaoh
in the metropolitan museum
as you bade me to do

what ho
my regal leatherface
says i

greetings
little scatter footed
scarab
says he

kingly has been
says i
what was your ambition
when you had any

insignificant
and journalistic insect
says the royal crackling
in my tender prime
i was too dignified
to have anything as vulgar
as ambition
the ra ra boys
in the seti set
were too haughty
to be ambitious
we used to spend our time
feeding the ibises
and ordering
pyramids sent home to try on
but if i had my life
to live over again
i would give dignity
the regal razz
and hire myself out
to work in a brewery
where one can buy friendship, and so men have no friends any more. If you want a friend, tame me....

"What must I do, to tame you?" asked the little prince.

"You must be very patient," replied the fox.

The little prince went away, to look again at the roses.

"You are not at all like my rose," he said.

"As yet you are nothing. No one has tamed you, and you have tamed no one. You are like my fox when I first knew him. He was only a fox like a hundred thousand other foxes. But I have made him my friend, and now he is unique in all the world."

And the roses were very much embarrassed.

"You are beautiful but you are empty," he went on.

Personalizing a thing means understanding enough so that in some way we become responsible for the thing and the thing necessarily becomes an integral part of everything we do.
This chapter records some of my clients' concerns and tells how their concerns influence the design projections. This project presented itself before I had an active interest in doing a thesis and before I began designing there were plans to build the design projections. The clients have been clear in communicating their concerns about cost efficiency, zoning restrictions, and the building code and also notions about how siting, materials and sizes affect the sense which a museum evokes. The method dictated by these parameters has been integrated with a method of designing with different kinds of form references.
The trustees of the Schoharie Museum of the Iroquois Indian have purchased a forty acre parcel of land in upstate New York northeast of Cobleskill, 45 minutes west of Albany near Interstate 88. Two of Schoharie County's largest tourist attractions are Howe Caverns and Secret Caverns and Secret Caverns. Both establishments maintain billboards on the highways of the Middle West and are featured with the token point-of-interest indicators on most road maps. For a price the proprietors of Howe Caverns will speak to you about the wonders of their huge cave, flood-lit in pastels, as you float about an underground pond in the comfort of a small boat. Secret Caverns advertises a 100 ft. underground waterfall which they will turn on for your viewing pleasure at no extra charge.

There was early emphasis on integrating the museum with each of these establishments. All discussions of treaties were undermined early on but the trustees have wisely taken advantage of the imminent flow of tourism by purchasing fine property on the road which leads from I-88 to both cavern sites.
A Small Museum for the Iroquois Indian

PROGRAM

"The museum is about the interface between the white and the early Iroquois cultures."

John P. Ferguson, Chairman
Schoharie Museum of the Iroquois Indian

The site covers 40 acres in Cobleskill, New York, about 45 minutes west of Albany in an agricultural area of the Catskill Mountains. About 2/3rds of the site is on the far side of a stream which in places has scoured out a small ravine. The building will occupy a rolling field at an easily accessible corner of the site. The rest of the road edge is fronted by a young dense woods containing some excellent large hemlocks and maples. As the Iroquois are a group which is traditionally very attuned with nature the museum's scope will include a walk around the beautiful and varied site which is indicative of both Upper New York State and the Iroquois culture.

The client dictated use by use program is as follows:

A. Director's Office (Administration Room) 200 s.f.
   A 'control tower': visual dominance over reception area
   and exhibition spaces,
   'first alert' view of the parking lot.
   Direct access to library and secondarily to the collections
   workspace.
   Natural and artificial light.
   Used by director, trustees and special visitors.
   Some storage requirements: files, cat. cards, brochures,
   stationery.

B. Library (Meeting Room) 250 s.f.
   This room may be rented out to small groups.
   Natural and artificial light.
   Used as an office by part-time bookkeeper, as a library
   by researchers including director and collections
   staff and as a meeting room for up to 20.

C. Collections Workspace 375 s.f.
   Work area must be dust free.
   Plumbing necessary for cleaning artifacts and for a dark-
   room.
   Some natural light is all right, plenty of artificial
   light.
The facing pages outline a use by use program which is partially capsulized in the ensuing text. The first part of the museum tour is the archeology exhibit in which visitors retreat into the dark depths of the exhibition space to view carefully lit fine artifacts salvaged from early settlements in Schoharie County. Visitors' return to present day Iroquois culture is punctuated by exhibit areas, each pertaining to different times and aspects of Iroquois history and life. People are invited to view the archeology lab, headquarters for digs at old Iroquois settlements in the area, and may be surprised when they are encouraged to walk outside to sit beside the small gorge behind the museum and enjoy its beauty and solitude. Groups view and participate in the chipping of a flint tool in the archeology demonstration area which is disconnected from the museum by a short path. The next exhibit includes artifacts dating from the years when the area was shared by Indians and white settlers. The crowning exhibition space is for modern Iroquois painting and sculpture and which also houses any special exhibits. The space includes an area where baskets and animals' furs may be inspected first hand. Visitors continue through the building to the dining area where they may enjoy a meal or snack featuring traditional Iroquois foods like fresh corn bread, corn soup and bread pudding. The dining area returns to the edge of the gorge where one may lunch while overlooking the trout stream and the woods.
Used by director, curator and visiting researchers. Space linked with collections storage, located near loading dock and construction workspace. Accessible from director's office and library.

D. Collections Storage 2000 s.f.
Artificial light only.
Used by director, curator and visiting researchers.
Space need not be contiguous.

E. Other Storage
Maintenance supplies, teaching materials, coat room.

F. Construction Workspace 500 s.f.
Work area must be dust sealed from collections workspace and ventilated with a wall fan to outside.
Access to basin, loading dock, utility room, ramp to exhibits.
Natural and artificial light.
Used by 1-4 people doing maintenance and exhibit case fabrication.

G. Garage 375 s.f.
Unheated but secure.
Used by maintenance staff to store ladder, chainsaw, tractor, snowplow etc.

H. Utility Room 500 s.f.
Should be clear of the collection to avoid possible water damage to the collection.
Contains all HVAC, humidifier, hot water heater, fuse box and auxiliary storage for construction workspace.

I. Gift Shop
Plenty of windows for people to look in through.
Located so that visitors must walk by it.
Some storage.

J. Auditorium 1500 s.f.
Terraced poured in place slab.
Artificial light only: dimmers, loudspeakers etc.
Used by 120 people, maximum, for viewing slides, movies and attending lectures. Often used for 15 minutes as a holding area for school groups.
Adjacent to bath and cloak rooms and main entrance.
Another part of the museum tour directly engages the acreage surrounding the building. Near the exit maps of the grounds are available to anyone interested in taking a walk down and across the stream and through rich woodland. The grounds are traced with small footpaths leading between stopping places where placards draw attention to some of the flora and fauna of the area and relate information on their importance to the Iroquois. The chosen route may be short or longer, potentially moving across high dry fields and down to the Cobleskill River. The return route follows the stream back up through quiet woods past a huge old stone dam and a special cluster of tall hemlocks and on up to the edge of the main field where a small version of a traditional long house may be inspected. At this point the path moves along the edge of the pond and up to the museum entrance again where one passes by the gift shop which sells baskets, bead work, silver jewelry and carved bone and antler made by Iroquois craftsfolk.

Much of the emphasis in quality of the museum's exhibits is placed to maximize their associative qualities. To help understand some of the range which may exist in exhibits the following breakdown has been implemented:

1. "Indian Land": like the Children's Museum in Boston where a very unusual kind of theater is built. This is useful in understanding what role the outdoor paths play to the visitor. There are many opportunities for intense fo-
K. Bathrooms
2 main baths near auditorium (3-4 ea.)
Another public bath near dining, and a 3rd upstairs for staff use only.
Main baths near entrance.

L. Archeology Exhibition Space
First exhibit area: cave-like, very controlled light (mostly dark with lit cases) to set off primarily small artifacts.

M. Archeology Lab and Storage
Window between archeology lab and visitors' regular route for peeking even when lab isn't accessible (usually).
This feature roots museum in community (local archeologists on board of trustees and many local folk work on the digs).
A large facility is necessary to attract any archeology funding.
A dirty room used to store dig materials and as a catalog area for findings.
Adjacent to door leading outside to gorge overlook and archeology demonstration area.

N. Archeology Demonstration Area
Separate from main building--maybe a dirt floor and headed with a wood stove.
Set closer to earth and woods.
Used both as a classroom and a quiet, secluded place of meditation.

O. Historical Exhibition Space
Exhibit forms an important bridge between archeological and contemporary exhibits.
Display includes larger artifacts: cradle boards, war clubs, bead work.
Potentially a diorama display.

P. Contemporary Exhibition Space
The main and most impressive space in the building.
Natural filtered light good for paintings and sculpture.
Located between Historical Exhibits and the Dining area.
May include touchable exhibits (furs, baskets, etc.) and some large artifacts (lacrosse sticks, sleds, a canoe) as well as contemporary paintings and sculpture.
cusing or for just taking a walk.

2. "An Indian really lives here and you're invited to visit with him": like traveling abroad. A less optional situation (once you're in, you're there) but more conventional and there's opportunity for greater exchange. The archeology demonstrations fit this category and to some extent the hands-on exhibits do too. The situation is probably closest to that found in traditional class rooms.

3. "This Iroquois stuff is more important than you so keep your distance": like the Museum of Fine Arts in Boston where the museum is an intimidating, almost impenetrable object and the art is protected from you in elite glass cages within the safe. By necessity this category applies to the archeology exhibit where the oldest pieces in the collection are also the smallest and most fragile. The required artificial light is exaggerated: the cases are illuminated with only the smallest spot lights and the ceiling height is dropped to further contrast the space with the other exhibit spaces of the museum.

Superimposed on this primarily sequential organization of the visitor's experience are the more complicated demands of the museum staff. It was once hoped that the museum could be visually controlled by one strategically located staff
PROGRAM cont'd

Q. Dining Area
Open mostly in the busier summer months.
Operated by 2 full-time plus extra staff and seats 50 people.
Visitors may order light lunches from a counter, pay and then find their seats and wait for their food to be brought to them.
Covered outdoor eating area too.
Plenty of pantry and 'fridge space for buying in bulk.
Ramp to loading dock.
Adjacent to summer exit. total 13,000 s.f.

Working Staff
Director
Curator (after a time)
Part-time accountant
Maintenance (1+)
Shop Salesperson
2 Dining area workers
1-2 Guide Volunteers

Maximum Visiting Load
2 tour buses full.
90-100 individual parking spaces.
member. This would still make it difficult, even in the slower colder months, for one person to run the shop's cash register, collect admission fees, guide tours and keep one eye on the finer pieces of sculpture at all times. It was subsequently deemed all right to solve the low use control problem by using just one access point in those slower months which may be viewed by a shop person and the director. The director would also like to have direct access to the library and the collection workspace yet remain out of the major traffic lanes. Other pertinent demands are outlined on the facing sheets.

Another source of input which is harder to outline is the affect that Iroquois culture may have on the museum's design. In order to lure tourists in from the road it is hoped that the museum's form incorporates some form of signage to reinforce the shingle hung out at the turn-off to the parking area.

In America they want to make everything something anybody can see by looking. That is very interesting, that is the reason there are no fences in between no walls to hide anything no curtains to cover anything and the cinema that can make anything be anything anybody can see by looking. That is the way it is.

A large tepee is not appropriate for an Iroquois museum and an enormous feather headdress is expensive and impractical. The Iroquois Museum in Buffalo, New York looks like a huge concrete turtle and it's true that turtles oc-
cupy an important place in Iroquois culture, but huge concrete ones stretch the association. So much for literal signage.

There is considerable interest in the oldest known traditional Iroquois structure: the long house. Today long houses are built in the form of extended rectangles with gable roofs running their length and clapboards for sheathing. There still are separate entrances for men and women at either end of the building. The oldest record shows a long house's plan with a similar rectangular form but the section is an arch of bent branches and the roof and siding are made from sheets of elm bark. This sliver of precedent was vetoed by a Methodist trustee who thought the traditional long house form bore too many similarities to that of the Methodist Church. I have chosen to try to work with
some aspects of the Iroquois long house anyway and hope that the Methodists won't take offense. As a result the museum as it has stood through many phases of redesign continued to consist of an assemblage of rectangular closures with a main exhibit space spanned with prelaminated wood arches (see Chapter 5: Design Projections and von Wiegand's multirectangular collage on the facing sheet). It may be that the average honeymooner from Indiana wouldn't recognize the Iroquois influence in the building's design (I'm from New York and I'm sure I wouldn't) but it is hoped that the building will make a strong impression from a distance, an impression which can later be reinforced with substantiating information.

Fortunately our board of trustees includes two Iroquois members, of whom Brenda LaForme has been of particular influence. Early on she approved of the siting which to her did more than follow Iroquois common sense (i.e. building in the lee of a knoll and above flood water). Locating the building at the edge of the field represented to her the meeting of the male and female worlds because historically the women find some of their identity in the rounded forms of the open fields where they farm and the men find theirs in the straight soaring forests where they hunt. Brenda also approved of the use of what Iroquois would recognize as the feminine, curved and the masculine, orthogonal forms in the building again for the implied bal-
...art is inevitable everybody is as their air and land is everybody is as their food and weather is and the Americans and the red Indians had the same so how could they not, the country is large but somehow it is the same if it were not somehow the same it would not remain our country and that would be a shame. I like it as it is.
ance of the genders.

The museum is integrated with the landscape as a reflection of the way that the Iroquois have always lived closely and in harmony with nature. Materials are being used in a straightforward structural system. Along the building's entire length a 12 foot span helps standardize some aspects of the construction and establish a built rhythm. The building backs into the knoll replacing part of it and extending the landscape with the built direction of the museum building. The director and chairman fortunately are anxious to maintain some important views back out into the landscape from the interior exhibit spaces to help reinforce the bond between the artifacts and the land where they were made and implemented. They would even like to have some of the pieces of sculpture shown in daylight, again with backdrops of meadow and woodland. There is a clear intention to learn about the Iroquois through their relationship with nature, especially as is evidenced by the museum's larger agenda. The unusually varied and beautiful site is a vital facet to the museum tour; visitors who forego that wing of the museum will miss the best part.
2. Transforming References

The facing page shows some photographs which I've consulted regularly for the past two years. They were taken over a 48 hour period at Thanksgiving in 1982. The farm is a few miles from the museum site near Cobleskill, New York. The landscape and the dramatic changes which rapidly took place in it epitomize my impressions of the region. I was hoping that these pictures would feed directly into an earth shattering expose on designing with references. But they have not. I have offered these photos to people who have asked about my project saying, "Look. See?" They are quite beautiful photographs and so I haven't lost any points by showing them to people. I could have done more with them but the only way I have used them has been as a reminder: as a jolt to keep me from forming too firm an image of the landscape and to help me bear in mind the potential of simple decision making.

13. Omit needless words. Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all his sentences short, or that he avoid all detail and treat his subjects only in outline, but that every word tell.
MUSHROOMS
for Jon and Jill

Eyeing the grass for mushrooms, you will find
A stone or stain, a dandelion puff
Deceive your eyes—their colour is enough
To plump the image out to mushroom size
And lead you through illusion to a rind
That's true—flint, fleck or feather. With no haste
Scent-out the earthy musk, the firm moist white,
And, played-with rather than deluded, waste
None of the sleights of seeing: taste the sight
You gaze unsure of—a resemblance, too,
Is real and all its likes and links stay true
To the weft of seeing. You, to begin with,
May be taken in, taken beyond, that is,
This place of chiaroscuro that seemed clear,
For realer than a myth of clarities
Are the meanings that you read and are not there:
Soon, in the twilight coolness, you will come
To the circle that you seek and, one by one,
Stooping into their fragrance, break and gather,
Your way a winding where the rest lead on
Like stepping stones across a grass of water.
Sometimes it's enough just to look at a reference, but not usually. References must be carefully selected because many good images make poor references and not all good references apply to every project.

References should be used to help clarify particular aspects of work in which case only part of the reference may be implemented in working on one aspect of a project. The hazard of finding a reference which does everything you want your own work to accomplish is laziness and of course plagiarism. A way to clarify the difference between plagiarism and using a reference is to focus on the transformation which occurs between the referenced work and our own.

What we have just said amounts to a truism. The painter's world is a visible world, nothing but visible: a world almost demented because it is complete when it is yet only partial. Painting awakens and carries to its highest pitch a delirium which is vision itself, for to see is to have at a distance; painting spreads this strange possession to all aspects of Being, which must in some fashion become visible in order to enter into the work of art. When, apropos of Italian painting, the young Berenson spoke of an evocation of tactile values, he could hardly have been more mistaken; painting evokes nothing, least of all the tactile. What it does is much different, almost the inverse. It gives visible existence to what profane vision believes to be invisible; thanks to it we do not need a "muscular sense" in order to possess the voluminosity of the world. This voracious vision, reaching beyond the "visual givens," opens upon a texture of Being of which the discrete sensorial messages are only the punctuations or the caesurae. The eye lives in this texture....
Once when I was six years old I saw a magnificent picture in a book, called *True Stories from Nature*, about the primeval forest. It was a picture of a boa constrictor in the act of swallowing an animal. Here is a copy of the drawing.

In the book it said: "Boa constrictors swallow their prey whole, without chewing it. After that they are not able to move, and they sleep through the six months that they need for digestion."

I pondered deeply, then, over the adventures of the jungle. And after some work with a colored pencil I succeeded in making my first drawing. My Drawing Number One. It looked like this:

![Drawing Number One](image)

I showed my masterpiece to the grown-ups, and asked them whether the drawing frightened them. But they answered: "Frighten? Why should anyone be frightened by a hat?"

My drawing was not a picture of a hat. It was a picture of a boa constrictor digesting an elephant. But since the grown-ups were not able to understand it, I made another drawing: I drew the inside of the boa constrictor, so that the grown-ups could see it clearly. They always need to have things explained. My Drawing Number Two looked like this:

![Drawing Number Two](image)
The facing passage is from the Little Prince. Antoine de Saint Exupéry's drawings result from transformations of a reference: first he looked, then he thought, then he drew. The transformation took place in his mind and the drawings became a tool implemented to help record and communicate his thoughts.

There is of course merit in trying to make accurate records of observations: the discipline required to make such a drawing is invaluable and not easily developed. But it is not generally enough, especially with the accessibility of photography, simply to record what one sees when making a drawing.

...there is no general way of doing any thing; no recipe can be given you for so much as the drawing of a cluster of grass. The grass may be ragged and stiff, or tender and flowing; sun-burnt and sheep-bitten, or rank and languid; fresh or dry, lustrous or dull: look at it, try to draw it as it is, and don't think how somebody "told you to do grass."

...it is always dangerous to assert anything as a rule in matters of art.... The only way to ascertain the ultimate truth in such matters is to look for it.

At times when I have had trouble keeping myself from drawing every brick in an interesting masonry building I have resorted to trickery. The ink line drawing (two pages before last) is the result of just such a sham in which I set myself to drawing a tiny fraction of a one inch cube of Galena. There was no way I could see the details
I was drawing and the result is a far better drawing than if I could have seen what I was looking at.

A less contrived way of working with the same idea is implemented in the next pairs of drawings. The first in each pair was selected to contrast the sleet which was mixing with rain when the work was done. The results follow from placing myself within the images and then drawing the resulting impressions. These exercises are included to emphasize the benefits of observing a reference and then leaving it: to take what is needed from a reference to promote the doing of something else.
3. Applying Form References

The following studies served to channel these musings on references and their transformations closer to the mark: making buildings. The range of references helps establish the versatility of the organizational methods.

In the first study Piet Mondrian's Composition in Black and White, 1917, and Frank Lloyd Wright's plan for Taliesin East, 1925, are used to clarify part of the process followed in making several passes at the design of the museum's entrance area.

The design projections came first. The process can be endless: there are many ways to arrange blocks. The references were selected to help identify a method. It is easier to proceed when a reference is chosen to fill a particular agenda, then it is there to do what you want it to do.

In the series of design projections various uses are deployed as stable rocks in a wash of access: the space is formed continuously around and between stable privacies which define the space. This constitutes a rocks-in-the-sand type organization (op. cit. Chapter 4). The intent is to draw visitors around the corner of the auditorium and into the reception area of the museum.
Access - specifically the entrance and reception areas, formed by spaces between pillars. Rocks are in the Sandy type field organization. Rocks are used as in the case a built piece of outside, and the sand is access which is very continuous.

But through the rocks are matched where they should be, for the place there is too much "sand". Need another way of moving the peoples into the building without having the reception area all the way but here and making it a lot larger than it is.

This new exhibition area may be considered "extensive" by the TC client. It may be just what they had in mind for an orientation exhibit - a crucible perhaps.

It looks like one might make it through this way in a bumpy car without stirring. Does it suit everyone.

The curve in the auditorium doors past around the go in into the museum rather than have them ascended of an exhibit.
The sequence of drawings traces several steps taken to define the entrance area with clear size differences and light to dark to light to dark sequencing.

Mondrian's painting was selected for its clarity. In the small segment studied it is demonstrated that marks on the canvas are located through their displacement in a two-directional field organization.

The first diagram (Illustration 26) demonstrates that edges of marks are not used to locate the edges of other marks: the organization is not line controlled. The vir-
in Mondrian's Composition in Black and White of 1917
marks on the canvas are located by displacing displacement in an open field 2 directional field organization. This portion of the painting illustrates dimensional self-stability; no marks are located by extending edges of rectangles back in space (nothing "lines up"); with the marks are displaced from each other by their own dimensions one or both of their own dimensions...
in one or two directions. This organization defines spiritual self-stability. The permutations and samples present many opportunities for directly designing space.
tues of the organizational system lie in the assumption that as architects we are better off designing space directly than by manipulating lines to control the space indirectly. It's easier to demonstrate the existence of a quality directly than by disproving the quality's converse, one case at a time. But the nature of the task, to demonstrate that the organization is not controlled by lines extended from the edges of rectangles, requires a tedious proof by thorough exclusion. It should be clear that the rectangles do not line up.

In the last diagram the dotted lines drawn at 45° angles which move through space from corner to corner demonstrate the organizational self-stability in the design. As a 45° angle defines the diagonal of a square, finding
This phenomenally self-stable example of architecture at F.L.W.'s Taliesin East also demonstrates design using a field organization. The strength of the space here relies on passing spatial organization; the line doesn't allow control (except sometimes to make weather closure).

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that angle defining the location of particular definitions indirectly locates a square in the space. The square, a non-directional form, signals stopping and formal stability. Stability in a directional organization allows the opportunity of interpreting the space as both directional and stable.

In a building, as in the part of Taliesin East's plan studied, this quality indicates that a space may be used optionally as access or a stopping place. The system operates best when the squares overlap and are built with a range of incompleteness.
In Illustration 31 of Taliesin East lines control the organization of the space when weather closure is built. Also where lines control the organization and access moves across the definition the result is a threshold, whether or not a door is present.

The study finally returns to my design in which the diagrams are tested for passing spatial organization and self stability. Many have warned (or several have warned many times) against believing that a freehand drawing can directly be drawn up hardline without losing a lot in the translation. This exercise demonstrates what aspects of a freehand drawing might easily be maintained when going to hardline format. When these projections were translated to hardline drawings (op. cit. Chapter 5) I did not hesitate to use my 45° triangle to help locate corners and to check quickly for line controlled spaces while taking the freezing step to vellum.
This next set of references were selected for a study of displacement and dimensional continuity.

Pablo Picasso's *Woman with Mandolin*, 1910, is from his group of cubist works painted in primarily grey and beige. The work testifies to the complex transformation of the presumably simple subject. In an attempt to identify some of the methods which have played a part in the design process the painting was studied both for instances of displacement and dimensional continuity.

The diagram shows that the arc shaped vector (a) affected the displacement of $A'$ from $A$. The dotted lines indicate the position which $A'$ occupied. The matching geometry of the pieces $A$ and $A'$ strongly support their displaced re-
relationship. The other examples B through G diagram other instances of the same process. Literal geometric displacements build anecdotal relationships in a design. The displacement occurs in a particular direction which may reinforce other directional moves in a design but the displacement does not exist in any form besides the spatial singular.

A similar system which generates more associative results is the method by which dimensions are literally repeated in a design. Both systems may function 3-dimensionally but then they are harder to diagram in a 2-dimensional format.

The second diagram identifies two dimensions which occur frequently in the painting. Size A was first found by measuring the amount by which the horizon line was displaced. It was then a matter of find-
ing the size repetition. Size B is found in the shadowy ground of the upper right-hand corner where a woman's head isn't. The repeated dimensions do not only demonstrate the discipline of the artist but contribute coherence and continuity to the painting.

The facing photograph shows a barn a few miles from the building site near Cobleskill, New York. The elevation analysis includes five sizes which occur both horizontally and vertically to generate a wide range of conditions. Its coherence is a result of both dimensional continuity and spatial self stability as is diagrammed by the dotted squares.
The analysis of my work is laid over a structural component diagram of the museum's first floor. Size A occurs most clearly in the length of the major exhibit space and is repeated in the interior and exterior spaces throughout the building. The square study demonstrates the stability of areas of the building which include several uses and cover areas both inside and out of the building.
In Cézanne's later works he transformed the solid real-life landscape into a spatial organization. The trees and rocks of a subject are transformed into space in his painting. In Cézanne's *Arbres se Reflétant Dans L'Eau* below a path is traced from edge to edge. The route doesn't fall within any one understandable territory in the painting's subject but moves freely from sky to tree to rock to shrub to water: the space wins.

In a building achieving this quality may seem a matter...
of course: we really have to be able to get everywhere. But the subdivisional habit of letting lines and even points rather than space control an organization is difficult to overcome.

This group of studies includes references selected for the study of access and containment. The spaces traced in the preceding exercise clarify some of the qualities which make Cézanne's work appropriate for referencing. The study of Cézanne's work on the facing page (Landscape with Boulders and Trees) diagrams a field of containments organized directionally, spatially, and independent of the subject.
The water-ground diagram on the facing page is drawn from a map of Eastport, Maine, covers approximately a 9x13 mile area, and in it the water is shaded black. The drawing indicates dimensional stability and more than ample reciprocity. It is clear that in this section of coastal Maine the north-south direction prevails. The east-west direction exists but is secondary, serving mostly to connect parallel north-south territories and as a destination or privacy.

Some names of east-west sections of connecting waters in the area are Chops, Hell's Gate, Oven Mouth, Strait, Passage and Gut. The names probably result from tidal features but whatever the reason they are not names which suggest calm or resting. In
contrast east-west territories which dead end get names like Cove and Eddy. If traveling by boat on the Maine coast it would be clear, even without the sun's guidance, whether we were heading east-west or north-south by noting which direction commanded the longer views. With so many options this strong organization hardly precludes the opportunity of getting lost, but it helps with general orientation.

In the museum's design this principle of reinforcing direction to help make differences and to aid in orientation was applied to the access and exhibit organizations. Visitors moving across the museum's major direction pass through secondary passages and maintain their orientation with long views down major spaces. They then continue within the access into spaces moving with the direction of the building. Exhibits (shaded areas in the plan on the facing page) are found in spaces normal to the building's main direction in the organizational equivalent of sheltered coves.
4. Museum References

The next series of studies is based on a method of analysis revised for a form language seminar in the spring of 1984 (Professor Maurice K. Smith's outline is appended). The outline here has been applied to a group of museum plans, including mine, to help identify some formal differences.
Two openings in the roof plate (3 and 7) admit light into an inner court (7) and into an open passage (3) through one end of the building. Outer walls (4) and those of the inner court are of glass. On the exterior, free-standing walls of stone would define outer courts (1) and terraces (10). Offices (2) and wardrobes would be free-standing. A shallow recessed area (5) is provided, around the edge of which small groups could sit for informal discussions. The auditorium (8) is defined by free-standing walls providing facilities for lectures, concerts and intimate formal discussions. The form of these walls and the shell hung above the stage would be dictated by the acoustics. The floor of the auditorium is recessed in steps of seat height, using each step as a continuous bench. Number (6) is the print department. Above it is a space for special exhibits. Number (9) is a pool.

Mies van der Rohe
The first project, shown on the facing page was designed by Mies van der Rohe as a "Museum for a Small City: Project, 1942." In order to use the outline as a means of comparing independent museum projects van der Rohe's design projection is equipped with the following statistics:

1. B,C: Multi-directional (two) and uniform field organizations,

2. A,C: Territory controlled by centers and open field,

3. A,D,E: Self stable by virtue of dimensional equality, proportion, and balance.

At the building's size territory is center controlled: it is symmetrical and balanced. At the room size structurally independent partitions are distributed in a balanced composition in careful avoidance of all edges. Within the partitioning system the organization is an open field exhibiting profound dimensional and proportional self stability (observe the displacement of recessed discussion area (5) from the wall by its own dimension and the balanced arrangement of partitions in the office space (2)). The structural system displays properties of a uniform field.
The Treasury is partly a museum, partly a depository of religious objects still used in the ceremonies of the cathedral. One of the design problems was thus to relate the exhibition space as closely as possible to the cathedral. This was achieved by sinking the museum 10 feet below the ground level in the courtyard adjoining the apse. A ramp connects it to the sacristy; the public entrance is by a flight of steps. The Treasury is also a permanent collection of a limited number of objects which is very unlikely to be altered. It was thus possible and desirable to design a series of spaces specifically to relate to these objects and to exploit the sense of permanence and of the special and sacred nature of many of the relics.

The ceiling is flat in the circulation areas, conical inside the tholos and is composed of concrete ribs balanced on the enclosing walls. The paving of the courtyard above repeats the pattern of these ribs. All spaces are air conditioned giving humidity control, essential in this underground situation.
This unusual plan is found in the Museum of the Treasury of the San Lorenzo Cathedral in Genoa, Italy. It was designed by Franco Albini in 1956. Smith's outline has been applied to the formal properties of this plan yielding the following results:

1. C: Uniform field organization,
2. A: Territories controlled by centers,

The even distribution of complete and nearly undifferentiated circular forms about a central access space gives the plan the qualities of a uniform field. Within the circular containments are nothing but centrally controlled territories. The access area does little else than connect the cylinders.

The use of the outline is meant to ensure a non-judgmental assessment of the design. My own opinion of the work follows a relative understanding of the design. I would usually argue with the assumptions which lead to solutions of this type but the text on the facing page from Michael Brawne's the New Museum indicates that the success of some of the intentions relies on the design's formal properties. There's no accounting for taste.
The next example includes the renovation and extension of the Italian Pavilion in Venice. The museum was designed by Carlo Scarpa and was built in 1962-1963. The blocks of building with gridded column bays were part of the original equipment. The plan assumes the following formal characteristics:

1. B: Multi-directional field (two),
2. B,C: Territory controlled by edge registration and edge displacement, and open field organizations,
3. A,B: Self stable by virtue of dimensional equality and reciprocity.

The two-directional organization (neither of which engage the direction of the canal) is intensified by the deployment of large identifiable containments. The northwestern containment has been rotated slightly, though still within the range of the north-south direction, demonstrating the rocks-in-the-sand behavior of the large containments. The direction of the water is built indirectly with small increments. Even the two bridges do not span in a direction normal to the canal.
There were two essential problems to deal with, how to combine the old house naturally with a new building in such a way that the exceptional qualities of the park were utilized, but in no way disfigured. During the work we found out that the glass corridor which became the connecting link, in itself gave the park a new quality, making the walk through the grounds a new delight to the visitor. When designing the building we wanted partly to subordinate ourselves to nature and partly to emphasize and stress its values.

Great importance was attached to creating rooms of various character. One walks through a row of alternately open and closed forms.

Jorgen Bo and Vilhelm Wohlert
The Louisiana Museum in Humlebaek, Denmark most closely parallels the intentions of my project. The elongated design by Jorgen Bo and Vilhelm Wohlert, 1958, connects an existing building with a favorable area of the site. The resulting scheme successfully engages the site, but due to expenses this does not represent a method which I can echo directly in my project.

The Louisiana Museum fits the following categorization:

1. A: Directional field organization,
2. B,C: Territory controlled by edges and open field organization.
3. A,B,C: Self stability is present in the form of dimensional equality, reciprocity and light/dark reversals.

Major containments (1, 2, 3) are deployed in an open field organization and passages leading between places are controlled by edges of the major containments, regularly registering with and displaced from them. At the building's size, the major containment size, and smaller room size the form is reciprocal. The building's plan demonstrates dimensional equality in the repeated size of the major containments (2-storey galleries). The long dimensions of the galleries are implemented in the direction normal to them, establishing their stable displacement from each other. The sequence of territories along the length of the building is reinforced by light/dark alternations.
(Untitled)

Flowers are flowers  
They have no feet, but stems.  
Grasses are grasses  
But they have no stems, no feet, no trunks.  
Trees are trees  
But they have stems, no feet.  
Leaves first are the way they are supposed to be  
Then they turn the color of autumn  
And they fall down from the trees  
And you pick them up  
And they are nice to put in water.  
Leaves are nice to tear apart  
And use as bits of leaves to put in moss  
And put on top of moss  
And under on top of grass  
And under and on top of trees.
My design projection has the following qualities:

1. B: Multi-directional field organization,
2. B,C: Territory controlled by edges and open field organization,
3. A,B,C: Self stability in the form of dimensions, reciprocity, and light/dark reversals.

"Don't trample here," a voice said, "I don't want you to, Qwfwq." It was the voice of my sister G'd(w)n.

"Why? What's there?"

"I made some things with things..." she said.

It took me a while to realize, groping, that my sister, messing about with that sort of mud had built up a little hill, all full of pinnacles, spires and battlements.

"What have you done there?"

"G'd(w)n never gave you a straight answer.

"An outside with an inside in it."

15
5. Design Projections

Drawing, architectural drawing in particular, bears some important analogies with the language of words. In architectural drawing, as in writing or speaking, one assigns meanings to symbols, and combines those symbols according to some system of rules which enables one to communicate more complex meanings; one makes a vocabulary and grammar.

Style takes its final shape more from attitudes of mind than from principles of composition, for as an elderly practitioner once remarked, "Writing is an act of faith, not a trick of grammar." This moral observation would have no place in a rulebook were it not that style is the writer, and therefore what a man is, rather than what he knows, will at last determine his style. If one is to write, one must believe—in the truth and worth of the scrawl, in the ability of the reader to receive and decode the message. No one can write decently who is distrustful of the reader's intelligence, or whose attitude is patronizing.

Many references have been made in this book to "the reader"—he has been much in the news. It is now necessary to warn the writer that his concern for the reader's plight (most readers are in trouble about half of the time) but never seek to know his wants. The whole duty of a writer is to please and satisfy himself, and the true writer always plays to an audience of one. Let him start sniffing the air, or glancing at the Trend Machine, and he is as good as dead, although he may make a nice living.

Full of his beliefs, sustained and elevated by the power of his purpose, armed with the rules of grammar, the writer is ready for exposure. At this point, he may well pattern himself on the fully exposed cow of Robert Louis Stevenson's rhyme. This friendly and commendable animal, you may recall, was "blown by all the winds that pass/And wet with all the showers." And so must the young writer be. In our modern idiom, we would say that he must get wet all over. Mr. Stevenson, working in a plainer style, said it with felicity, and suddenly one cow, out of so many, received the gift of immortality. Like the steadfast writer, she is at home in the wind and the rain; and thanks to one moment of felicity, she will live on and on and on.
ACCESS alternately moves around the start of the curve and moving around the inside of the curve.

Introduction of a circular forms is to make different places for particular events within the museum.

Limited and wide opportunity for exhibit seleciton of the Oregon's Indian.

A tower combines.

The blackened part is now covered by the continuity of the building, which is one of the withdrawn one in life or display.

The loading is still a matter, an introduction in the other part will be integrated as a feature. This is the major decision.

The curving toward area is now complete; the axis of the keyhole form allows the curve to be more associative.

The inconsistency helps the forms too. Introduction of strong structural system helps organize the space.
if monkey glands
did restore your youth
what would you do
with it
question mark
just what you did before
interrogation point

yes i thought so
exclamation point

No Feet and Feet

Flowers are flowers and Bees are bees.
A flower has stem, but bees have feet.
Footnotes


5. Ibid., p. 69.


12. Ibid., p. 48.

13. Ibid., p. 79.


Illustrations


2. Ibid.

3. Woodcarving by Eva Fadden.


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16. By Author.

17. Tichnor Quality Views. Bathing Beach and Fishing Pier, Ocean Grove, N.J.

18. By Author.


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23. By Author.


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67. Ibid. V. 1.

Fig. 5. Independent Method of Controlling Reversal of an Adjustable Slide on a Bevel Gear Cutting Machine

Bibliography of Theses

