BUILDING WITH LANDSCAPE

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ABSTRACT

All buildings have a relationship with their immediate site and
their larger landscape: some buildings simply occupy their site
while other buildings define and intensify their landscape. The
relationship between building and landscape is important, under-
standable, and describable. Through analysis of selected buildings
and their landscapes and through development of site specific
designs, this thesis will develop a methodology that demonstrates
that a good building comes from building WITH the landscape,
not just ON the landscape.

Thesis Advisor: Maurice K. Smith
Title: Professor of Architecture, Emeritus
To Andy

Acknowledgments

My family,
especially Nana.

My thesis mates:
Bjorn, Paul, Kristen and Leah;

Toscanini and Emma.

My teachers.

Pearl Jam.
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INTRODUCTION

All buildings have a relationship with their immediate site and their larger landscape. Some buildings simply occupy their site, taking up the necessary area for their foundation, and use the landscape only as a place upon which to perch. Other buildings use the landscape as a positive attribute of the building: the building and its site are intensified aspects of the landscape. A direct exchange, association and interdependence between building, landscape and user allows the building to be part of its landscape, and, by extension, also allows the user to inhabit the landscape.

This thesis set out with the task of understanding and synthesizing some aspects and attributes of the behavior observed in buildings that are part of their landscapes. It represents a process of seeing and observing.
A built environment that is part of its landscape is richer than one in which buildings are images and objects in themselves, separate and distinct from their landscapes. The integration of the built environment with its landscape (whether open or urban) implies that the elements of the built environment do not exist separately, but are experienced in relationship to each other. The landscape is the web that weaves these elements together.

An intent of this thesis is to employ a method to describe the positive relationship between building and landscape. My approach uses the observational methodologies of Maurice Smith that I have learned through his Form Language class. Built environments are analyzed for their spatial structure and morphology, and not for their image or cultural association. While describing a built environment through its organizational behavior does not describe the total experience of a place, it offers a means to understand the relationship between built elements and their relationship to the landscape. It also offers a method to describe continuity between building and landscape.
The analysis focuses on the field organization, dimensional self-stability and alternations in the built environment as a way to describe the positive relationship between building and landscape.

All landscapes have a direction or inherent structure, and a Directional Field organizes the built environment along this same structure. The direction of the building intensifies the direction of the landscape. The structure of the landscape underlies the spatial organization of the building, immediately bringing the richness of the landscape into the experience of the building. A directional field establishes continuity between building and landscape. It sets up a domain larger than the physical building with the effect that the landscape becomes integral to the experience of the building.

A Dimensional Self-Stability is the basic action of defining a habitable territory. It is a "stop" in the "go" of the directional field. A stability may be found in the landscape or in a building, or as a
combination of both. Territories that are left "incomplete," that is, open to the landscape or another building territory, build upon the continuity established by a directional field. Dimensions and territories in the landscape reoccur as dimensions and territories in the building. The building is organizationally part of, and continuous with its landscape.

Alternations of building and landscape, of closure and opening, of "stop" and "go," of dark and light add to the richness of the built environment. With each alternation comes an opportunity for exchange between building and landscape.

This thesis represents a way to look critically at a process, and begins a disciplined approach to observation, understanding, and synthesis of building and landscape in the built environment.
Two sites
Two situations
Two landscapes.
"You can't have one without the other."

F. Sinatra


Bottom: Open landscape from the collection of the Fruitlands. Robert Walter Weir, View of the Hudson River from West Point, 1869.
The project involves two sites: an urban landscape and an open (natural) landscape. The urban landscape is Quincy Street in Cambridge, MA. It marks the edge of Harvard Yard, and is home to three of Harvard University’s museums: the Carpenter Center, the Fogg and the Sackler. The open landscape is the Fruitlands Museum complex in Harvard, MA. Both sites include a series of buildings programmatically related, but physically, spatially and territorially discontinuous.
Harvard Square Area of Cambridge, MA.
with Quincy Street.
Quincy Street - The Fogg, Sackler and Carpenter

Quincy Street forms the eastern edge of Harvard Yard, but its major buildings, the Sackler Museum, the Fogg Museum and the Carpenter Center relate neither to the Yard nor to each other. They build the street as an edge, but do not build any shared territories.

As planned, the Fogg Museum completes the courtyard formed by H. H. Richardson's Sever Hall and Emerson and Robinson Halls. In fact, Quincy Street, along with an eight foot tall wrought iron fence along the Yard, effectively cuts off the Fogg from its intended courtyard. The Fogg does not contribute to the Sever courtyard, nor does it contribute to the street. The ground floor of the museum is raised eight feet above the sidewalk, and its entrance scarcely addresses the street. It is very possible to walk down Quincy Street and not realize that the Fogg is a public building, so uninviting is its entrance. Nor are any clues given to the passerby as to what might lie behind the entrance.
Harvard Yard and Quincy Street.
The Fogg Museum (1927) is built around an interior courtyard copied (at 27/28 scale) from the 1518 Canon’s House in Montepulciano, Italy. Though this courtyard should be the focus of the museum, it is, in use, a dead zone of cold stone. The ground floor is not used as exhibit space, and remains empty, employed only occasionally for concerts or private parties. The public has no need, nor invitation to use it. Recently, the museum began to address this problem: a gift shop was opened in the arcade opposite the entrance, around the edge of the courtyard tables and chairs were set up with books and catalogues about the museum’s collections, and a sculpture by Ellsworth Kelly was installed off to one side of the courtyard. Still, the courtyard begs to have some life breathed into it. On the upper floor, paintings and a collection of clocks line the corridors around the courtyard, but no galleries open directly onto the courtyard, isolating it from the rest of the museum. The courtyard is cut off from exterior world and insulated from the museum world.

James Stirling’s Sackler Museum, built in 1984, is programmatically part of the Fogg. Visitors who visit one museum often visit both. But lying on the other side of Broadway it hardly seems an exten-
tion of the Fogg, and even less a part of Harvard Yard. Like the Fogg, the Sackler is a closed, boxy building that offers the public no hint of what might be inside. Stirling's original proposal included an enclosed bridge across Broadway connecting the two museums, but the bridge was never built. It was deemed unacceptable by Cambridge residents who viewed the bridge as a symbol of a private institution (Harvard) taking over public space (Broadway).
The Carpenter Center (Le Corbusier, 1964) is not a public building, per se; aside from two small public galleries, one on the ground floor and one on the third floor, the bulk of the building is given over to Harvard art students. However, the building is visually open to the public, and anyone wishing to walk up the ramp through the building is able to view the studio classes.

The Carpenter Center is part of the public realm, and is part of its landscape, while the Fogg and Sackler, though actually more public in use, are closed off to the public and to their landscape. If the inner workings of the Fogg and the Sackler were suggested to or comprehended by someone on the exterior, they too could build part of their landscape. The ramp of the Carpenter Center gives a different perspective of Quincy Street: at the top is a small terrace which has a view through the trees into the Sever Courtyard. The skewed, diagonal view, above the level of the street and the wrought iron fence, hints at the connection that the Fogg should have with the Sever courtyard. Open the Fogg and Sackler to the street and to the public view, build continuity between all the museums, and between the museums and the Yard, and the Fogg and Sackler could be part of their urban landscape.
Harvard, MA, with Fruitlands Museums.
**Fruitlands Museums**

The Fruitlands Museums comprise six buildings: a Carpenter-Gothic style tea room/administration building, an ersatz barn gift shop/reception center, a picture gallery, an American Indian museum, a Shaker house relocated from the Harvard Shaker Community, and a farmhouse, home to Bronson Alcott's short-lived utopian transcendental community in 1843.

Clara Endicott Sears founded the Fruitlands Museums in 1914 to preserve the objects and artifacts and "diverse spiritual forces" that helped shape pre-industrial revolution New England. Landscape was a powerful influence on pre-industrial culture. The Fruitlands collections reflect the diverse roles landscape played in pre-industrial New England: the Shakers valued the quality of light and built to maximize it, the American Indians ascribed religious significance to the landscape, and the painters of the Hudson River School deified landscape in their monumental canvases. The Museums are set on an original farmstead from the early 18th century, which adds another dimension to its collection: the visitor is reminded of the struggle to farm the land.
Fruitlands Museums
A. Administration/ Tea Room
B. Reception Center
C. Picture Gallery
D. American Indian Museum
E. Shaker House
F. Fruitlands Farmhouse
However, in the experience of visiting the Fruitlands Museums, the actual, physical landscape is forgotten.

The Fruitlands is set in a typically beautiful New England landscape of fields, meadows, orchards and forests. The site is steep, dropping 200 feet from Prospect Hill Road down to the Fruitlands farmhouse. Despite this rich and varied landscape, the experience of the Fruitlands Museums are barely touched by the presence of this landscape. A visitor parks in one of three parking lots, and visits each of the buildings in order, blindly following the asphalt path that leads from one building to the next. Visitors scurry along, ducking into the buildings, without lingering outdoors, probably because there is no place to linger outdoors. The landscape exists primarily as a distance to navigate between buildings.

There are benches to rest on in front of the Picture Gallery and the American Indian Museum, but there is no sense that these are places in the landscape because they make no defined territory in the landscape. They are exposed to all of the landscape at once. The two places where people do stop in the landscape are on the terrace of the tea room, which, built up and out from
the surrounding ground, has a view out to Mount Monadnock, and in the yard of the Farmhouse, which is protected and buffered from the larger landscape. These are "stops" in the landscape at each end of the visit to the Fruitlands, but the middle of the visit - the Picture Gallery, et al. - is all "go" in the landscape. The "stops" happen inside the buildings, with no associated stops in the landscape. This schism between the experience of building and the experience of the landscape reinforces the division between building and landscape in the Fruitlands Museums.

The landscape that has influenced the objects and aspects of the Museums' collections has the potential to become part of the Museums' experience. Its site looks out onto its own Hudson River School landscape. The landscape of hills and valleys that was home to the Nashoba Indians is still there. The apple orchard and grape arbor of the Fruitlands Farmhouse still exists. Sunlight still bathes the Shaker house. It is possible for the landscape to become part of the experience of these buildings, for the landscape to be treated as an aspect of the building.
OBSERVATION STUDIES

Three building complexes are examined in detail: William Wurster's Gregory Farmhouse, the Alhambra and the Mayan city, Uxmal. Each of the three shows a consistent organizational behavior, embodying principles of field organization, dimensional stability, and alternation, that builds exchanges between building and landscape. The scale of these varies tremendously, from single-family residence to palace and courtyard complex to city. Yet all describe an observable continuity between building and landscape that offers a means of understanding the interrelation of building and landscape.
The Gregory Farmhouse.
William Wurster, 1928,
Santa Cruz Mountains, CA.
THE GREGORY FARMHOUSE

The Gregory Farmhouse stands in a clearing on a sunny knoll in a grove of redwoods at the end of a long, narrow dirt road. The water tower, wall and gate mark the transition from the landscape of the Santa Cruz Mountains, with dense groves of redwoods, oaks and firs into the landscape of the Farmhouse. At the entrance, the organization of the Farmhouse is clear and straightforward: from the high front wall with its diagonally braced gates flung open that welcomes the visitor, to the tall milk-carton shaped water tower rising up from its squat one story base that marks the arrival, to the low L-shaped house, with its roofed gallery that forms two adjacent sides of the central courtyard, to the low wall that buffers it from the larger landscape. Yet the direct, simple organization of the Farmhouse belies its depth of spatial structure. Within its low walls it builds its own private internal landscape of open courtyards, sheltered porches and enclosed rooms, while it remains visually connected with its larger landscape, shaping views of the forest, orchards, vineyards, and Monterey Bay. The idea that the Gregory Farm-
Plan of the Gregory Farmhouse
house is part of its own landscape comes from understanding that its internal landscape (the entry court, the center courtyard, the rear yard) is integral to the physical building.

The territory that brings focus to the spatial organization of the Gregory Farmhouse is the gallery/porch/walkway that forms two sides of the central courtyard. It is a sheltered extension of the courtyard, and an open expansion of the house, forming a threshold between them. Though there is a short interior corridor that links the living room with two bedrooms, it is the open gallery that provides the hallway for the house. Each room opens to the outdoors—sometimes directly and sometimes indirectly through a porch. The living room opens on three sides; every bedroom opens onto a sleeping porch; the porch off the kitchen is used as a dining room; and the long gallery, as circulation between rooms in the house, opens the entire house to the outdoors. Every interior space is associated with an exterior space. The effect is to include the landscape as part of the dwelling, and visa versa: the dwelling is part of the landscape.

The visual continuity and associations between building and courtyard illustrate, but do not fully describe, the sympathetic
relationship between building and landscape in the Farmhouse. It is important to describe the formal systems of organization, territorial control, and self-stability in order to understand better the behavior of what is intuitively observed: that a positive association between building and landscape exists in the Farmhouse.

As the series of diagrams shows, the Farmhouse complex reads as a reciprocal figure/figure study: the courtyards define the building, which in turn, are redefined by their relationship to the building. The courtyard territories create interlocking zones of exchange - between interior and exterior, between interior and interior, and between exterior and exterior - so that the Farmhouse reads as a figure/figure study, with each territory redefined by its relationship to another. All the territories read together as a built intensification of the landscape.

**Field Direction**

The major field direction is defined by the open territories at each end of the complex which show a "dog bone" behavior (p. 32). The living area of the house builds a direction along the "bone"; the ends of the bone - the open yards - continue this direction, building a continuity from the contained courtyard
Dimensional study of the Gregory Farmhouse

Dimensions:
- 140 feet
- 90 feet
- 60 feet
- 45 feet
- 33 feet
- 25 feet
- 15 feet
- 8 feet
landscape into the larger landscape. The dog bone behavior repeats at a smaller size with the porches. Anchoring each end of the house along the direction of the living area, the porches build a continuity from the contained house into the open courtyard landscape.

The field direction is shown by the displacement of the largest dimensions along the field (p.33). As the field is built up, the largest dimensions are deployed along the direction of the field, their displacements and passings generating new dimensions in the field. Laterally, across the field, dimensions define "zones" that extend along in the direction of the field.

The directional field is reinforced at each dimensional size and use. The dimension of the courtyard territories are aggregated to build a direction within the larger landscape (p. 35). The dimension of the public living area - the living room plus the eating porch - is deployed in the direction of the field (p. 37), as is the dimension of the living room itself (p. 39). The living room dimension (length) reinforces the field direction when it is repeated in the length of the water tower complex, in the length of the gallery along the living area, and in the width of the "L". The
Dimensions:
140 feet
95 feet

The landscape size dimension defines the size of the site from entrance wall to the "L" of the house and from the west porch to back wall. The passing of this dimension generates the building size dimension.

The large building size dimension defines the length of the Farmhouse, from porch to porch, in the direction of the field. It repeats in the displacement of the water tower from the house. The passing of these two dimensions in the direction of the field generates the center courtyard dimension (bold dash tape) and the living room dimension (bold dot tape). Perpendicular to the field, the dimension defines the boundaries of the immediate site.
dimension that is the width of the living room defines the zones that extend along the direction of the field: the bedrooms beneath the water tower, the width of the access at the entry and in the center courtyard, the width of the house itself, the displacement of the south wall from the house, and in the larger landscape, the dimension of apple trees from one another and from the wall.

**Courtyards**

The limits of the Farmhouse's immediate landscape and its ensuing spatial structure, already defined by the largest site-size dimensions (p. 33), are reinforced by the three courtyard territories: the entry court, partially bound by the entrance wall, the water tower and the west porch at the end of the house; the central courtyard, defined on two sides by the gallery; and the rear yard, defined by the back sleeping and eating porches and, tangentially, by the low back wall. (p. 35). They define "stops" along the "go" of the landscape and build territories in the landscape.

None of the courtyard territories is completed by building along four sides. However, their partial completion by an edge defines
Dimension: 60 feet

The large courtyard territories define the limits of the Farmhouse's site, while building a direction through the site from the entry gate to the low wall in the rear yard. The displacement of the rear court from the central court defines the dimension of the gallery, though the actual territory of the gallery lies within the dimension of the central court. The courtyards are not passive leftover or captured spaces. They actively define the spatial structure of the Farmhouse. The courtyard territories are deployed in a linear progression of dimensional stabilities. These are territories that are moved through, as from room to room.
their dimensions, while maintaining their mutual continuity.
Though separated from the larger landscape by low walls, all the
courtyard territories retain, on two sides, visual continuity with
the larger landscape. The courtyards are a positive aspect of the
Farmhouse, building a place in the landscape at a size smaller than
that of the on-going landscape.

Within the larger territorial courtyard dimensions lie smaller
dimensions, generated by the passing or displacement of the
larger dimensions. These new size dimensions define the dimen-
sions of the rooms and smaller outdoor territories of the Farm-
house, adding richness to its organization and its inhabitability. It
is clear that the courtyards are not leftovers from the building,
but rather, by their dimensions, alternations and continuities,
actively build part of the territory of the building. In the spatial
structure of the Farmhouse, the courtyards are territorially
"equal" to the building, with both defined by the same dimen-
sions. Whether a given territory is built or not, or enclosed or
not, is optional. The idea of options of where and how territories
Dimension:
45 feet

Within the largest courtyard dimension lies a second dimension defined by the inside edges of the gallery, repeated at the outside edges of the gallery and found again out in the forecourt and rear yard. The dimension corresponds to the open space in each courtyard remaining when the zones of the gallery and porches are subtracted. These smaller courtyard territories are moved around. Their displacement from each other builds the territory of the house.
are defined is the crux of the argument that the Farmhouse is part of its landscape. A territory is not defined by making a Courtyard or a Room, but rather courtyards and rooms (and porches, galleries, driveways and water towers, and etc.) are made by giving built definition to a range of mutually-generated dimensional territories.

**Dimensional Self-Stability**
Dimensional analysis reveals that the individual building pieces relate to each other through dimensional displacements and overlaps or "passings." Each dimension then generates some other dimension that is part of the entire field organization. But in addition to building up the field, each size also generates territories at its own size. The orthogonal crossing of similar dimensions is defined as a dimensional self-stability, and is the basic demarcation of habitable territory, a "stop." Thus, a given territory is generated first by deploying dimensions, and then, intensified through building. The dimension of the living room length repeats across the width of the living room, extending out to the south wall (p.39). Thus, dimensionally, the side yard is part of the living room territory, building an exchange between it and the landscape.
Dimension: 33 feet

The dimension of the length of the living room reappears in the width of the living room across to the south wall, in the length of the kitchen and eating porch, and in the width of the "L" the across the house from the gallery to the eating porch. These dimensionally stable territories intersect with each other in the most public area of the house - also where the house turns the "L". This very public dimension also defines the length of the very private sunbathing yard. It also defines the displacement of the water tower from the main house (and the size of the water tower complex itself.) In effect, the dimension of the house defines the exchange between territories.
Territories defined by dimension, and not by complete building definition, are more associative with the landscape. The living room size dimensions at the entrance court build a stable territory that is only tangentially completed by a building edge (p. 37). Its openness to both the larger landscape and the building builds continuity between the landscape and the building. The stability defined by the displacement of the water tower from the house builds the territory of the entrance access. The repetition of this size stability along the field reinforces the continuity from landscape to building. The orthogonal dimensions do not necessarily need to cross. Their deployment in a double directional "T" also builds stable territory, as with the dimensional equality of the living area with the games area (p. 37).

**Alternations**

At each dimensional size, territories exhibit multiple alternations (or reversals) of different types that allow the Farmhouse to read as part of a landscape (or as an intensification of the existing landscape) rather than as a single, closed building. At each size there is an alternation of open court or porch and sheltered room (landscape or access and building alternation); an alternation of territories to move through and to move around; an alternation of public access with private use, and an alternation of
Dimension: 25 feet

In the public realm of the Farmhouse this dimension defines the width of living room plus the dimension of the gallery. It reappears as the length of the privacies in the house: a bedroom plus a porch and again as the utility car/tool area.

Along three sides, this dimension defines the displacement of the house from the wall, creating a zone of exchange between the house and the larger landscape. It defines the displacement of the water tower from the entry wall, of the living and sleeping areas from the south wall and of the house from the tool shed. In the center courtyard it defines the displacement of the grassy area from the edges of the house.
one size territory or dimension with that of another. The alternations add richness to the experiences of the place.

The water tower is displaced from the house by its own dimension, the dimension that builds the access into the Farmhouse complex, and at the living room also builds the access through the side yard (Fig. 21). Moving across the field, there is an alternation of building (water tower), access (entry court), and building (house). At this size, the side yard reads as "building," as part of the living room territory. The alternation/reversal continues again into the larger landscape (orchard). At a smaller dimensional size, the side yard reads as landscape or access (fig. 25), as an alternation with the living room (building) and the gallery and internal hall way (access).

For a given size dimension there will always be an alternation of use: the dimension of the open public gallery and closed private baths (fig. 27), or the dimension of the entry yard with the driveway with the width of the house (fig. 25). Each use alternation defined by the same size dimension, reinforces reading the Farmhouse as part of its landscape. The physical building, courtyard
Dimension:
15 feet

The dimension that is the width of the living room also defines the dimension of the driveway access, the sleeping porches, the kitchen and the carport, the displacement of the water tower from its own "yard," and is also the dimension between orchard trees. The grassy area in the center court, itself a room size dimension, is displaced from the gallery by the same room dimension. That the interior room size dimension also defines territories that are exterior rooms (the porches) and exterior territories that are not rooms at all makes clear that the Farmhouse builds an inclusive relationship between its building and its landscape with territorial dimensions, not by use or form.
landscape and the larger landscape are all part of the same organizational field, with none considered to be separate from the others.

Porches
The open gallery that defines two adjacent sides of the center courtyard defines the edge of the courtyard and the boundary of the house as part of the same territory. The two experiences of courtyard and building come together to define a major exchange between two territories. Similarly, the sleeping and eating porches define the exchange between the house and the backyard while the porch at the west end of the house defines the exchange between the entry court and the house.

As an example of "building with landscape," the Gregory Farmhouse exhibits basic formal principles common to "good" buildings. This behavior is examined again in the Alhambra. While the Alhambra itself, in its function, its size, its site, along with the culture and era that produced it are very different from the Farmhouse, the basic formal organizational principles remain the same.
This dimension defines the smallest public access size in the width of the gallery, as well as in the spacing of the columns that hold up the gallery roof. This person size access dimension also defines the dimension of car access in the car port. Inside the house, this dimension defines the most private and closed containments - the baths, closets and tool storage.

From the largest size to the smallest, each dimension shows a multiplicity of definitions, uses and forms. The idea of "building with landscape" recognizes that any given territory is dimensionally generated and defined by its relationship to another, and not by its specific use or function.
The Alhambra
Granada, Spain.
Palacio del Partal in the foreground.
THE ALHAMBRA

The Alhambra is not one building, but a whole group of buildings - a fortress really - anchoring a mountain spur which overlooks the town of Granada below. The oldest fortification walls date from the late thirteenth century, but the heart of the complex - the Nasrid palace with the Lion and Myrtle courtyards - was constructed in the late fourteenth century. After 1492, with the expulsion of the Muslims from Spain, the Alhambra suffered centuries of destruction, neglect, modification and wholesale change, but its basic formal structure remains unchanged.

An analysis of the Alhambra reveals a profound sympathy between the built environment and the landscape environment, so that the world of landscape passes seamlessly into the world of architecture. The architecture of the Alhambra builds a relationship between the building and the courtyard so that the landscape (the courtyards and gardens) cannot be separated from the actual building, and is, in experience, part of the building. The building/courtyard relationship extends to the larger landscape,
Plan of the Alhambra.
through visual continuity, and therefore, it too is included as part of the experience of the building. The Alhambra complex is an intensification of the existing landscape, a series of territories made in order to inhabit the landscape. It is not a building sealed off from its landscape, but a building integrated into and part of its landscape.

In the Alhambra, courtyards and rooms are strung together like beads on a necklace; the thread is water. The progression through the palace, from the Patio de Machuca, through the Mexuar, to the Patio de los Arrayanes (Myrtles), past the Sala de la Barca, to the Patio de los Leones (Lions) and into the Sala de las Dos Hermanas which overlooks the garden of Daraxa, uses water as a metaphor for the landscape, bringing the landscape into each room of the palace. But the actual landscape is never far away either: each room opens on to a courtyard or has a view out to the landscape.

The inner courtyard of the Myrtles is completed by a building edge on all four sides. The pool and sky serve as the courtyard's virtual landscape. But the visual continuity from the Court of the Myrtles through the Salon de Embajadores and out into the
larger landscape defines the courtyard and room as an extension of the landscape (p.35). The courtyard is part of the room that is part of the landscape; the room is part of the courtyard that is part of the landscape; and the courtyard and room together are habitable intensifications of the landscape. Similarly, from the Court of the Lions, the visual continuity through the Sala de las Dos Hermanas and out into another courtyard landscape, the Garden of Daraxa, defines these three territories as all part of one. The dimensional consistencies reinforce reading the building as part of the landscape.

The same building/landscape relationship also occurs in the Palacio del Partal, a courtyard nearly without a building edge, and in the Patio de Machuca, the most fiercely completed (it has a roof in addition to four thick walls) courtyard territory (p.37). The pavilion at the far wall of the Partal forms a screen to the landscape, a visual filter between the courtyard and the landscape, linking both together; in the Machuca, one side wall transposes its thickness into a columned alcove with view out to the landscape, bringing the experience of the landscape into the closed court. The dimensional relationships mark the landscape and part of the building territories.
Dimensional Study of the Alhambra

Dimensions:
- 250 feet
- 140 feet
- 70 feet
- 50 feet
- 33 feet
- 15 feet
The visual connections that flow between building, courtyard, and landscape illustrate, but do not fully describe, the sympathetic relationship between building and landscape in the Alhambra. The formal systems of organization, territorial control, and self-stability as shown by dimensional consistencies show the behavior of what is already intuitively observed: the positive association between building and landscape that exists in the Alhambra.

As the series of diagrams shows, the Alhambra reads as a figure/figure study: the landscape (which includes the courtyards, gardens, and landscape beyond) defines the building, which in turn is itself redefined by its relationship to the building. All the territories read together as an intensification and inhabitation of the landscape.

**Field Direction**

The major field direction is defined by the mountain ridge along which the Alhambra is built. All dimensions and their associated territories, from the largest, multi-courtyard size to the smallest room size, reinforce this landscape direction. The landscape
Dimension:
250 feet

The landscape size builds the edge with the landscape in the direction of the field. This dimension is defined by the displacements along the landscape edge, where the building moves into the landscape, and by reciprocity, the landscape moves into the building.

The landscape dimension also defines building dimensions; the aggregate size of the Myrtles and Lions courtyard builds a dimensional stability with the width of the Alhambra from the Lions court to the Peinador.

The passing of the landscape dimension builds continuity and generates the smaller dimensional sizes.
dimension that builds the edge of the Alhambra reappears as the dimension across the Myrtles and Lions courts in the direction of the field, and across the field to define the territory of the building complex.

**Courtyards**
The spatial structure of the Alhambra, already established by a directional field, is reinforced by the courtyard territories: the Court of the Myrtles, the Court of the Lions, the Palacio del Partal, and the First Court/ Patio de Machuca. These territories form the spine of the Alhambra, the territories from which all other territories are generated. And like a spine, the courtyard territories are organized directionally. By reinforcing the direction of the fortressed hill, they include themselves in the structure of the larger landscape. The building, generated by the courtyard territories, grows from this spine. In the end, the courtyards become the figural building, with the building itself as the access between the courtyards.

**Dimensional Displacements**
The large courtyard territories do not join directly with each other; nor do their dimensions pass to build common territory between them. Instead, they are displaced from each other by
The large courtyard territories build the spine of the Alhambra along the direction of its fortified hill. The courtyards are displaced from each other by their own width or length, or by the dimension of a room. These dimensions reoccur throughout the Alhambra, actively generating the building. The courtyards are not passive leftover spaces. They define the spatial structure of the Alhambra, building it as part of their own landscape.

Dimension:
140 feet
some dimension. All the dimensions that occur repeatedly in the building occur as a dimensional displacement between two courtyard territories. They are displaced from each other by their own length (between the Lions and the Partal), by their own width (between the Machuca and the Myrtles), by the dimension of a palace room (between the interiors of the Myrtles and the Lions), and by the dimension of the pavilion rooms at the ends of the courtyards - which also is the dimension of the access (between the Myrtles and the Lions).

These displacements along the spine, the separations between the courtyard vertebrae, actively generate the building. From the dimensions of the displacements come the dimensions of the rooms and smaller courtyards of the Alhambra. It is clear that the courtyards are not leftovers from the building, but, rather, by their displacements from each other, actively define the territory of the building. In defining the spatial structure of the Alhambra, the courtyards include the building within the courtyard landscape, and by extension, within the larger landscape.

The behavior of the visual continuity from a large courtyard out to the landscape (another courtyard or the larger landscape) can
Dimension:
70 feet

From the First Court to the Machuca, through the Mexuar and the Court of the Myrtles and into the Salon de Embajadores, this dimension marks a straightforward, linear progression of dimensional stabilities. These are territories that are moved through, from room to room. Moving on from the Court of the Myrtles, this dimension defines small courtyard territories are moved around: the Garden of the Daraxa and the territory between the Embajadores and the Peinador.

This dimension defines the displacement along the landscape edge, building an exchange between the building and landscape.
be described with dimensional displacements. For example, the Salon de Embajadores is displaced from the Court of the Myrtles by its own dimension (p.43). By displacing a territory from itself, the new territory that now comes between the two territories is essentially part of both territories. (As long as the new territory remains at least partially open to both the original territory and the displaced territory.) In the example of the Myrtles, the Sala de la Barca, dimensionally part of the Embajadores and of the Myrtles at larger dimensional sizes (pp.37, 39), at this size builds an exchange between the Embajadores and Myrtles by displacement.

Reciprocity
The dimensions of these displacements, and of the stabilities they form, also generate exchanges between the building, courtyard, and landscape. The displacement of the landscape edge along the Patio de la Reja builds an exchange between the building and landscape with reciprocal behavior (p.41). The Embajadores moves out into the landscape while the landscape comes into the Reja courtyard, displacing the building / landscape edge by the width of the Myrtles courtyard. On a smaller scale, the Mirador de Daraxa steps out into its courtyard landscape to generate exchange between the Sala de las Dos Hermanas and the Garden.
Dimension:
50 feet

As with the other dimensional sizes, this dimension defines stabilities as well as displacements. The dimension defines the interior of the Salon de Embajadores and the Patio de la Reja as stabilities, repeats itself in the Palacio del Partal and measures the displacement between the Myrtles and the Lions and between the Myrtles and the Embajadores.

The Embajadores and Reja form an edge that builds a reciprocal exchange with the landscape. The Embajadores moves out into the landscape while the landscape comes into the Reja courtyard, displacing the building/landscape edge by the width of the large courtyard.
Alternations of light and dark in the Sala de los Reyes. Court of the Lions is to the right of Daraxa (p. 45), while the garden just east of the Hermanas also generates landscape exchange through reciprocity.

**Alternations**

At each dimensional size, territories exhibit multiple alternations (or reversals) of different types that allow the Alhambra to read as part of a landscape (or as an intensification of the existing landscape) rather than as a single, closed building. At each dimensional size there are alternations of open courtyards and sheltered rooms, an alternation of landscape and building, an alternation of dimensional displacement with dimensional stability and an alternation of one size territory with another. Experientially, there is an alternation of territories to move through and to move around and an alternation of the sound of water and silence of stone. In the larger landscape there is the built alternation of the Alhambra and the Generalife across a steep ravine. The alternations reinforce the idea that a given size territory is not constrained by a given use.

The Court of the Myrtles is displaced from the Court of the Lions by the dimension of the access, an alternation of landscape and building, and of one dimension with another. The Salon de Embajadores is displaced by its own dimension from the Court of
Dimension:
33 feet

The dimension that occurs as the width of the pool in the Court of the Myrtles does not appear as a stability regularly encountered in the progression through the Alhambra as do the other, larger dimensions. It occurs primarily as an edge or a boundary. The dimension of the Sala de los Reyes and of the Sala de los Abencerrajes defines the limits of the Court of the Lions. At the landscape/building edge, this dimension moves the building edge out into the landscape in the Peinador de la Reina and, in the small garden just north of the Court of the Lions, it moves the landscape edge into the building.
the Myrtles, an alternation of dimensional stability with dimensional displacement. The dimension of the Peinador moves out into the landscape while the same dimension moves into the building in the garden next to the Court of the Lions, an alternation in the displacement of the building/landscape edge.

Though the previous examples of alternation all describe the organization of territory, the behavior of alternation is also illustrated by the movement of water through the channel in the Court of the Lions: the water course leads from a pool in the shelter of the Sala de los Abencerrajes out into the open courtyard with its central Lion Fountain and back into another pool in the shelter of the Sala de las Hermanas. The alternations described by the flow of the water continue out into the open courtyard landscape as the fountain in the Garden of Daraxa is displaced from the pool in the Hermanas by the dimension of the water course leading from the Lion Fountain pool into the Hermanas pool.

The sequences of alternation reinforce the continuity between territories and set up a system by which the Alhambra grows from the contained, courtyard landscape into the building and out to the larger, open landscape. The multiplicity and repetition
Dimension:
15 feet

The dimension of the access builds territories that surround the courtyards (rooms, niches, and walkways) and defines territories that overlook the landscape. The Peínador and the room off the Machuca displace the building/landscape edge, moving the building out into the landscape. The Mirador de Daraxa, overlooking the Garden of Daraxa, repeats the same edge displacement and building/landscape exchange, but with the smaller, courtyard landscape. The access dimension also defines the size of the fountains and pools that are the focus of the courtyards.
of dimensions and stabilities, coupled with the displacement of these dimensions and stabilities, make the exchanges between building and landscape.

Section
The same dimensional relationships that build building and landscape territories in plan also work in section. The width of the Lions court is the interior height of the Hermanas and the Abencerrajes, and the height from the Jardin de Lindaraja (Daraxa) to its Mirador. The width of the Hermanas is the height of the Mirador de Lindaraja and the width of the Peinador de la Reina. The dimension of the Lions plus its associated colonnaded rooms is the dimension of the Jardin de Lindaraja and the height of the Peinador. Equal dimensions show stable territories in the landscape as well as in the building, effectively "building" the landscape along with the building.

The Alhambra originally was the palace of the Muslim rulers of Granada. After the Reconquest in 1492, it became an exotic retreat for Spain's Catholic Queen and King, Isabel and Ferdinand. Charles V, Holy Roman Emperor, began an unsympathetic addition alongside the Nasrid palace in 1526, but soon after he abandoned the Alhambra to three centuries of neglect.
Dimensional Study
Section through the Alhambra

Dimensions:
200 feet
140 feet
33 feet

TORRE DEL PEINADOR DE LA REINA

MIRADOR

SALA DE LAS DOS HERMANAS

PATIO DE LOS LEONES

SALA DE LOS ABENCERRAJES

JARDIN DE LINDARAJA
When Washington Irving happened upon it in 1829, Gypsies and thousands of cats graced the Courts of the Myrtles and Lions, a squatters settlement where once lived kings and queens. His *Alhambra: A Series of Tales* painted a romantic picture that helped turn the Alhambra into Spain's premier tourist attraction. Though now stripped of all furnishings and other accoutrements of inhabitation, the Alhambra transcends its life as a museum-piece of architecture from Islamic Spain. It offers today - completely removed from its original, intended use and social context - a building that is part of its landscape, where the use of the building is immediately connected to the experience of the landscape. The connection between building, courtyard and landscape was the foundation upon which the Muslims built the Alhambra. It is this connection that makes the Alhambra a vital, exciting building today. Throughout its evolving history and changing use, the connection between building, courtyard, and landscape remained intact, as viable today as it was 600 years ago.

As an example of "building with landscape," the Alhambra exhibits the basic formal principles found in the Gregory Farmhouse, demonstrating their behavior at a larger scale. This behavior is examined again in the Mayan ruin, Uxmal.
The Court of the Lions in ruins. An engraving from 1832.
View of Uxmal from the East with the Palace of the Governors on the left, the Pyramid of the Magician at the center, and the Nunnery on the right.
UXMAL

The city of Uxmal was one of the Mayan civilization's greatest architectural triumphs. Since the powerful city's abandonment 800 years ago, much of it has been consumed by the Yucatan rain forest. Although Uxmal exists today only as a partially restored ruin, its spatial structure remains intact.

When studied through photographs, Uxmal appears to be a collection of buildings, each an object unto itself in the landscape. From a certain point of view this is true: the Puuc Mayas concentrated on the perfection of individual, freestanding buildings, temples, and pyramids rather than on carefully ordered site planning. Although scholars of Mayan civilization feel that the site lacks comprehensive planning, the diagrams show that consistent dimensional territories build relationships between the buildings and the landscape.
Site plan of Uxmal
The huge size of the buildings and the vastness of the rain forest landscape can obscure the relationship between building and landscape; the buildings appear to loom, randomly scattered, above the tree canopy. But random or not, organizational dimensional consistencies exist to build territories within the landscape. The dimensions define exchanges between landscape and building; the spatial structure of Uxmal is based on the landscape and not on a particular arrangement of buildings.

Field Direction
The rain forest landscape continues as far as the eye can see, in all directions, in the flat topography of the Yucatan peninsula. But within this overwhelming landscape, the largest landscape dimension, relative to the size of Uxmal, builds a direction (p. 79). Unlike the Gregory Farmhouse or the Alhambra where the largest landscape size is defined primarily by built elements, in Uxmal it is defined by open territories. The field organization of Uxmal approaches an "open field." If the directional fields of the Farmhouse and the Alhambra can be described as an "all built" world, where the figure is ground and the ground is figure (a figure/figure world), the open field of Uxmal can be described as "rocks in the
sand." The buildings (rocks) are not objects in the landscape (sand) though, because the dimensions of the landscape generate the territories that are optionally occupied by the buildings.

**Dimensional Stabilities**

The largest dimensional size, 1500 feet, defines two dimensional stabilities in the landscape of Uxmal that overlap to generate a third territory (p. 79). The dimensions in the direction of the field are generated by the displacement of two building groups, the Nunnery and the North Group, from the raised terrace of the Great Pyramid complex. Their directional displacement defines the length of Uxmal. Across the field the displacement of the dimensions defines the width of Uxmal, from the House of the Old Woman to the west wall. The intersection of the two stabilities generates the central open courtyard territory shared by the Nunnery, the Palace of the Governors, the Great Pyramid and the Cemetery. Reinforcing the idea of "building with landscape" the central courtyard is not the *a priori* territory of Uxmal,
Dimensional Study of Uxmal

Dimensions:
- 1500 feet
- 1000 feet
- 650 feet
- 450 feet
- 350 feet
- 180 feet
- 115 feet
but is the result of the generative action of the landscape size dimension. At the smaller dimensional sizes, the buildings and their quadrangle courtyards serve to intensify the action of defining territories in the landscape.

Territorial exchanges between the building complexes and the larger ongoing landscape are generated from this landscape size (p. 79). As the dimension defining the open territories that includes the buildings and their immediate landscape, it defines the exchanges between the buildings and the ongoing landscape. The degree of "incompleteness" in the stable territories allows these territories to build positive exchanges with the landscape, in that they are not closed off from the landscape.

**Courtyards**

The large open courtyards are built by the dimensional displacement of one building complex from another, much as in the Gregory Farmhouse the water tower is displaced from the main house (p. 81). The courtyard territories are dimensionally stable and build habitable territory within the larger landscape. The same size dimension also defines the territories of the largest building complexes, so that the spatial structure of the buildings
Dimension:
1500 feet
1000 feet

The large dimensional sizes build a direction at Uxmal, carving out territory from the surrounding rain forest. The largest size (1500 feet, small dots) shows two stabilities, at the size of the landscape, that pass (overlap) to build the central open courtyard territory between the Nunnery, the Governors Palace and the Cemetery. The next size (100 feet, large dash) builds stabilities at the size of the largest building group with the Palace of the Governors and the Great Pyramid. Both dimensional sizes build continuity with the rain forest landscape and generate exchanges between it and the open courtyard landscape.
builds continuity with the structure of the courtyard landscape. The additive, aggregate nature of the large open courtyard and building complex territories reinforces the direction of the landscape and the option for exchange within the landscape.

The dimension of the smaller, building-size courtyard territories is repeated in the landscape, building continuity with the landscape. The dimension of the Nunnery is the dimension of the courtyard on the raised terrace east of the Palace of the Governors and of the territorial displacement between the two (p. 83). The dimension of the courtyards in the North Group and Cemetery Group (now in almost total ruin) are repeated in the small landscape dimensions west of the Palace of the Governors and in the displacements between many of the smallest buildings (p. 85). The dimensional equality of stable territories found in both the building and the landscape organizes the building as part of its landscape. The buildings are territorial intensifications of the courtyard landscape; the courtyards are territorial intensifications of the larger ongoing landscape. The territorial continuities established between building and landscape generate the buildings as part of their landscape.
Dimension: 650 feet

This dimension builds alternating stabilities of building and landscape along the entire field. By building very open territories, this dimensional size builds exchanges between the buildings and their adjacent courtyard territories.
Alternations

The dimensional territories at each size generate built/ unbuilt or building/ landscape alternations moving along in the direction of the field. The alternations reinforce the continuity with the landscape for any given size dimension by defining the building with the same organization that defines the landscape. Moving in the direction of the field at the size of the largest courtyard territory (p. 79) the built/ unbuilt alternations are: the House of the Pigeons, the stable territory west of the Palace of the Governors, the Nunnery and the House of the Magician, and the stable landscape generated by the displacement of the northern building complex from the Nunnery.

The territories of the "built" alternations include some landscape definition as part of that territory. The landscape that is included as part of the building generates a transition, or exchange between the building and landscape. So, the terrace in front (south) of the Nunnery is a threshold between the building and the landscape, similar to the behavior seen in the gallery of the Farm-
Dimension: 450 feet

This dimension defines displacements between the building groups at the edges of the site. Whereas the largest dimensional size builds territories that define the spine of Uxmal, from which the smaller territories grow, this size defines the edges of Uxmal. As with largest size, these territories build exchanges with the larger landscape. Their open definition allows the landscape to read as part of the building territory.
house. The "unbuilt" territories of the courtyards are open to the landscape, inviting direct exchange with the larger landscape.

The alternation behavior is the same for smaller dimensional sizes. The stable territory of the raised terrace of the Palace of the Governors builds an alternation with the Nunnery and the courtyard territory between them (p. 83). Even at the smallest dimension, alternations build continuity between building and landscape: the Ball Court and the building edge of the Nunnery courtyard build an alternation with the terrace of the Nunnery (p. 89). At this dimensional size the terrace is "unbuilt," but at the larger courtyard size, this same terrace is included as part of the "built" alternation. This reinforces the idea that the built environment is a holistic assemblage of building and landscape with neither element ever separate from the other.
Dimension:
350 feet

As with the other dimensional sizes, this dimension defines stabilities as well as displacements in the both the building and the landscape. The dimension defines the Nunnery; the forecourt of the House of the Pigeons; the length of the Palace of the Governors - displaced by its own dimension from the edge of its terrace; the building groups at the North, South and Cemetery groups, the House of the Old Woman; and the displacements between the Nunnery and the Terrace of the Monuments and between the House of the Magician and the Ball Court.
Reciprocity

The raised terrace of the Palace of the Governors, Great Pyramid, House of the Pigeons complex builds exchange with the open courtyard landscape through reciprocity. The Governors and Pigeons move out into the courtyard while the courtyard moves into the terrace. The dimension of the Great Pyramid is the dimension of the small courtyard between the Governors and the Pigeons; the displacement of the Great Pyramid from the edge of the raised terrace built the small courtyard (p. 85). The Palace of the Governors intensifies the courtyard edge and builds its own stable territory on the raised platform. The next smaller size, 180 feet (p. 87), reinforces this behavior of reciprocity and exchange. The Great Pyramid, the displaced edges of its small courtyard, the entry into the courtyard and the territory between the House of the Turtles and the Ball Court all show the same dimensional stability.

The scale of Uxmal is enormous: the Nunnery is larger than the entire Nasrid Palace at the Alhambra and the Gregory Farmhouse would comfortably fit on top of the House of the Magician. The Gregory Farmhouse could also squeeze into the Court of the
Dimension: 180 feet

The dimension that occurs as the width of the House of the Magician reoccurs in all the building groups of Uxmal as the dimension of the small courtyards or as the buildings themselves. The courtyard territories at this dimension behave as the courtyards in the Alhambra: they actively define the building edges through their dimensional displacements.
Uxmal from the south. The House of the Turtles is at the center with the Nunnery beyond, the House of the Magician to the right and the Palace of the Governors at the far right.

Lions at the Alhambra. While the scales are vastly different in these three building complexes, the organizational behavior is consistent. The defining factor in building/landscape relationships is organizational behavior. Dimensional stabilities, displacements, exchanges and alternations build continuity from the ongoing landscape to the courtyard landscape to the building, generating a positive exchange between building and landscape.
Dimension
115 feet

This dimension defines the smallest buildings at Uxmal - the size that is the largest courtyard dimension in the Alhambra, and the site dimension in the Gregory Farmhouse.
Additional Studies
Regardless of scale or function, there exist consistent organizational behaviors that describe continuity and exchange between buildings and their landscapes. The Siza Pools in Portugal, the Louisiana Museum in Denmark and Behnish's schools at Schafersfeld in Germany all exhibit behaviors that amplify the pattern presented thus far.

Quincy Street and the Fruitlands Museums are diagramed as they exist now, and for comparison, as they would be with proposed additions to their sites. The additions would restructure their respective sites so that the landscape is built together with the building, as territories are made in both the landscape and the building. At Quincy Street the Fogg develops a relationship with Harvard Yard and the with Sackler and Carpenter; at the Fruitlands the museums build landscape territories that are part of the museums' experience.
Siza Swimming Pool

The large pool is displaced by its own dimension from the sea wall, which is also the dimension of the main rock outcrop. The dimension appears again in the triangular upper concrete terrace, in the terrace below the children's pool and in the small ocean inlet. The dimension of the children's pool - which, like the large pool is itself dimensionally self-stable - is the dimension of the width of the dressing area/access/sea wall. The largest dimensions define the size of the whole complex. The sea wall houses the access, the dressing rooms and the terraces, and in form and direction reinforces the experience of the natural rocky beach.

The pools and walls are a built intensification of the existing landscape. They are built "with" the landscape, reinforcing its direction and behavior. The concrete terraces, walls, and pools add to the landscape of real rocks and ocean, building an association between the beach and water, and between the natural and man made elements. As the dimensional study shows, the manmade elements and natural landscape share the same organization. The terraces and pools are not objects grafted onto the rocky shore, but are part of the ongoing landscape. They build and intensify the direction and associations of the landscape.
Dimensional Study


Dimensions:
- 375 feet
- 110 feet
- 50 feet

[Diagram of the swimming pools showing dimensions and layout, with annotations for Pool and other features.]
The dimension between the lake and the sea defines the territory of the museum grounds. Each of the smaller dimensions defines both building and landscape dimensions. The dimension the original mansion and the addition extending west defines the territory of the courtyard north of the mansion and the displacements of the Moore and Calder sculptures from the galleries. The dimension of the open air galleries generates the displacement of the internal galleries from each other. The dimension of the mansion is the basic dimension of a new gallery or new small courtyard.

Each recognized dimensional size generates something of the entire field; no dimension defines a singular use territory. Building dimensions equal to landscape dimensions argue for both elements as part of the same organizational system. The dimensional equalities of building and landscape elements define the building as part of its landscape. The museum buildings are not separate from their landscape, but are built with the landscape. The experience of the landscape and the experience of the buildings are one and the same.
Dimensional Study


Dimensions:
- 550 feet
- 300 feet
- 150 feet
- 60 feet
Schools at Schafersfeld

The dimensions that define the church complex are the same dimensions that build the territory of the schools. The overall size of both the church and school complexes is the equivalent as is the displacement between them. Within each complex, the dimension of the multi-building size builds the direction, while the smaller sizes define the territories of the buildings and their associated open spaces. The relationship of the larger dimensions generates the smaller dimensions, with the smaller dimensions no less important generators of territories. All the territories are thus interrelated, and generate the field as a whole.

In each complex, the dimensional equalities build up a field of territories which are then optionally built and defined as buildings or as open territories. The complexes augment the structure of both their immediate hilltop landscape and their larger topographic landscape. The centuries old church and the newer schools are built with the landscape; their presence enhances the experience of the existing landscape and makes the experience of the landscape part of the experience of the buildings.
Dimensional Study
Grammar School, Secondary School and Gymnasium at Schafersfeld, Lorch, Germany.

Dimensions:
- 550 feet
- 325 feet
- 150 feet
- 100 feet
The Fogg Museum / Harvard Yard

While the heart of Harvard Yard, the courtyard in front of Widener Library, is dimensionally self-stable, this largest size dimension is not found elsewhere in the Yard and does not build any other part of the field. Nor do the other smaller dimensions contribute to a directional field: the dimensions are repeated as the sizes of other buildings or as dimensional displacements that measure the distances between buildings, but they do not contribute to generating territories. There is little dimensional relationship between the buildings and the landscape: the buildings of Harvard Yard are just objects in their landscape.

The courtyard territory in front of the Fogg offers the potential to build a dimensional relationship with the Fogg - the Fogg is displaced from Sever Hall by its own dimension, which is also the width of the courtyard - but the reality of Quincy street and the wrought iron fence that runs along the Yard side of the street denies any experiential relationship. The Fogg, designed to be part of the Yard via its courtyard territory, is actually one of a series of objects lining Quincy street. The collection of buildings is just only a collection; it offers nothing with which to build a relationship with one another or with their larger landscape.
Dimensional Study

Existing Fogg Museum, Cambridge, MA

Dimensions:
- 350 feet
- 225 feet
- 150 feet
- 50 feet
Blocking Quincy street to car traffic and claiming parts of Quincy Street for proposed additions to the museum would allow the buildings at this end of the Yard to develop relationships with one another and with their landscape. The buildings would no longer be objects in the landscape, and together the buildings and landscape would build one another as part of a field organization.

The largest Yard dimension is now repeated as part of the Carpenter /Fogg landscape territory, as the displacement between the Fogg and Sackler internal courtyards, and again in the access to the northern area of Harvard, as it generates a directional field. The smaller dimensions of the Fogg now define both building and landscape territories, and the dimension of its internal courtyard is now apparent both inside and outside the museum. The interior courtyard dimension defines a landscape use, while the landscape size defines a building use.
Dimensional Study

Proposed Fogg Museum

Dimensions:
- 350 feet
- 225 feet
- 150 feet
- 50 feet
While the existing Fruitlands Museums show dimensional equality among the individual buildings and the displacements between them, these dimensions just measure consistent distances; they do not build dimensionally stable territories. The exception is the landscape dimension at the Farmhouse which starts to define a territory for the four small museum buildings. The small stabilities are all parking lots - not very habitable territories. This same parking lot dimension measures the distance between the small museum buildings.

Throughout the site each dimension corresponds to a particular use or experience: 600 feet for the landscape; 400 feet as the distance between the group of four buildings and the upper tea house and lower farmhouse; 150 feet for a parking lot or the distance between two small buildings; and 50 feet as the dimension of an individual building. The dimensions build a direction in the landscape but do not build any territories within the landscape. For a given dimension there is not a multiplicity of use territories. The building size always defines a building, and the larger sizes measure the distances between the buildings (or the
Dimensional Study
Existing Fruitlands Museum, Harvard, MA

Dimensions:
- 625 feet
- 400 feet
- 150 feet
- 50 feet
expanse of a parking lot.) In the Fruitlands, the buildings are small objects in a large landscape, with no exchanges between the buildings and their landscape.

A proposed addition to the Fruitlands would join the small museum buildings into a larger complex. No longer objects in the landscape, the buildings would reinforce a relationship with the landscape. The large landscape dimension still builds the direction of the landscape, but now the smaller dimensions define stable territories in both the buildings and landscape.
Dimensional Study

Proposed Fruitlands Museum

Dimensions:
- 625 feet
- 400 feet
- 150 feet
- 50 feet
"The city is only the desert in disguise."

T. Pynchon, V.
DESIGN STUDIES

The following design studies of the Fogg and Sackler Museums and of the Fruitlands Museums continue investigations begun in the previous chapters. How does one build continuity between building and landscape? How does the landscape become part of the experience of a place? How does a building define territory in the landscape? These studies are presented as part of the process.
Sketch Model of Quincy Street showing building/landscape continuity between the Fogg, Sackler and Carpenter and Harvard Yard. (top right). The continuity extends to the Harvard Museums, Busch Hall and Peabody Museum, at the north end of campus (center left).
Sketch Model of the Fruitlands.
Does continuity in an open landscape require the addition of lots of building? The site is extended south (right).
Above: Detail of Fogg Museum

Opposite: Model of Quincy Street
Drawing showing built continuity along Quincy Street to the Peabody Museum.
Fogg, Sackler and Carpenter.
Drawing of Quincy Street with alternate scheme.
See page 101 for dimensional study.
Opposite: Section through Fogg Courtyard.

Below: New Elevation of Fogg Museum
Model of Fruitlands with the Farmhouse on the left, new "woodswalk" at the top, and additions to the Picture Gallery and American Indian Museum on the right.
New Reception Building
with Theatre and Studio.
Drawing of Fruitlands with alternate scheme. See page 105 for dimensional study.
CONCLUSIONS

The previous chapters show organizational dimensions between building and landscape that describe their positive relationship. A positive relationship between building and landscape is one where each aspect of the building and its landscape build mutual territories that are experienced in relation to each other. In describing the dimensional aspects of this behavior, some general conclusions can be drawn.

First, each size dimension and stable territory is found in both building and landscape definitions. The larger dimensions, at the size of the site, provide continuity with the larger, ongoing landscape, build an exchange with the larger, ongoing landscape and build the direction of the field. The smaller dimensions, at the size of the building, intensify the actions of the larger dimensions and build exchanges between the building and its immediate landscape. Dimensions of a given size found in both building and landscape build options for defining territories that allow the experience of "place" to be part of the landscape.
All the built elements participate in defining the larger landscape size. The larger dimensions and stabilities are continuous with one another or pass/overlap with one another to build continuity with the landscape. The smaller dimensions and stabilities are often displaced from each other to build exchanges between the building and the landscape. In this way continuity is built between the larger, ongoing landscape and the immediate site-size landscape, between the site-size landscape and the building, and by association, between the ongoing landscape and the building.

Each size dimension and its associated stabilities build both building and landscape elements. Once the dimensional relationships between the building and landscape are established, each intensified territory then builds both the building and its landscape. The organization of building and landscape is not the fitting together of individual object-pieces, but relating building and landscape
territories with one another within the ongoing landscape. Again, the elements of building and landscape are part of one interrelated built environment. The relationships of dimensions and stabilities in the built environment describe a place as belonging both to the building and to the landscape.

In the end, a dimensional system for describing the behavior of a positive building / landscape relationship is just that: descriptive. It is not a prescriptive method for design. It is a means to describe a method of seeing. The idea that the landscape is an aspect of the building can be understood intuitively, but through observation and description, it can be demonstrated concretely, and thereby help suggest possibilities for better design.
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