Ritual Elements:
A Cemetery in Montana

by
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Note: All illustrations by author, unless otherwise noted.
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Abstract

“As pines keep the shape of the wind even when the
wind has fled and is no longer there
So walls guard the shape of man even when man has
fled and is no longer there.”

George Seferis¹

The walls we make are the culmination of
choices. This thesis explores the intensification of an unbuilt landscape; underlying it is
the notion that placemaking is both site and
culturally specific, and reveals some deeper
meaning about who and where we are, and
what we value. I seek to celebrate the poetic,
philosophical, and physical aspects of land-
scape and architecture through the design of
three integrated places: a chapel, a cremato-
rium, and a columbarium. Through this pro-
cess I reflect upon the expression of ritual,
loss, and remembrance.

Thesis Supervisor: Ann Pendleton-Jullian
Title: Assistant Professor of Architecture

Thesis Critics: William Porter, Edward Levine
Dedication

To Mimi with love
Origin of the Project

Architects make artifacts that last for generations. I believe this implies a responsibility: to understand that what we make is a reflection of our attitudes, values, and beliefs and to examine these with care. Ultimately architecture answers a need for orientation. It locates us physically and culturally within a landscape: it is placemaking.

*Cemetery* comes from the Greek *coimeterion* meaning "place where one sleeps". As a typology cemeteries are uniquely qualified to address ideas of responsibility and placemaking because the act of design is so definite. Cemeteries are rarely if ever transformed to other uses; therefore, as architects, we determine an enduring environment.

Generating form for a ritual involves placemaking at the cultural level. In the case of this site located in Montana, cemeteries have historically acted as markers in the vast unpopulated landscape: they claim territory and connect us to a place.
Transculturally, rites of passage exist for birth, marriage, and death. Rituals reinforce understanding and acceptance of transition from one state to another. A ritual burial confirms death. Rituals are both formal and personal. Interwoven in the act of placemaking is the notion of ritual association with the time dependent processes of injury, healing, and scarring as a means to reconcile loss.
This thesis is a reaction against the placelessness of three conventional types of cemeteries.

**Lawn Cemetery**
Its flat horizon denies death. The landscape is seemingly unmarked. It simply exists as a parking lot for the dead which is easy to maintain. Individual expression is denied resulting in complete anonymity.

**Mausoleum**
Walls of crypts create a built environment that lacks any relationship with nature. Standardization of the vaults leaves little room for personalization. The inflexible cellular nature of the crypts does not accommodate a wide variety of familial relationships.

**Garden Cemetery**
This heavily designed "natural" landscape manipulates the environment for its picturesque qualities rather than as an expression of a specific place. It depends on spacious plots and large monuments making it expensive and accessible to only a few wealthy individuals.
These projects offer solutions that successfully manifest specific issues of placemaking.

**Iqualada Cemetery**

by Enric Miralles and Carme Pinós

Site responsive design integrates walls of vaults and mausoleum in a rugged terrain.
Woodland Cemetery
by Eric Gunnar Asplund and Sigurd Lewerentz
Enhancing attributes of the landscape to evoke associations of death and rebirth is the point of departure for this project.

Brion-Vega Cemetery
by Carlo Scarpa
Placemaking at the cultural level is superbly executed here particularly by the use of water which is an important reference in Venetian culture and Christian iconography.
The Site

Physical History

"From the boiling rocks has come all of the earth's past
From their dust will come all its future"

Helen Hoover

The site lies on the eastern slope of the continental divide in the foothills of the Rocky Mountains. It is located in a geologically significant area called the Boulder batholith. By definition, a batholith is a large granite mass at least 40 square miles in area. The Boulder batholith created 70 to 78 million years ago, consists of granite which is an igneous rock formed through the crystallization of molten magma from the earth's core. Intense volcanic activity followed the formation of the Boulder batholith creating the adjacent Elkhorn Mountains. The area also lies in the Intermountain Seismic Zone and infrequently experiences earthquakes.
Large rocky outcroppings combined with a mixture of open grassland and heavily forested rolling hills characterize the site. The trees consist primarily of evergreens. An underground stream corridor runs parallel to the base of the largest rock formation and surfaces as a natural spring. This is the only source of surface water on the site. Deciduous trees follow the stream corridor indicating its presence. They only occur along this path. The climate is extreme with temperatures ranging from 100 plus degrees in the summer to minus 40 degrees in the winter.

Cultural History

*Culture preserves the map and the records of past journeys so that no generation will permanently destroy the route.*

*Wendell Berry*[^5]

The site is located 10 miles south of Helena, Montana. Helena, the state capital with a population of 30,000, functions as both the symbolic and geographic center of the state of Montana. The city owes its beginnings to the discovery of gold in 1864. The region extending south of Helena for sixty miles to Butte is the most mineralized in the state. This area

developed as a result of mining. By the turn of the century, these gold and silver mines were exhausted. One mile from the southern entrance to the site was one of the largest silver mines in the state. Abandoned mining holes or pits are scattered around the site. These remain as one of the physical reminders of man’s presence in this otherwise natural landscape.

The next wave of settlement resulted from the Homestead Act of 1909. This was an opportunity for individuals to ‘earn’ up to 320 acres (one mile by one half mile) from the federal government in exchange for improving the land (essentially living on the property as the primary residence as well as cultivating a specified number of acres for a period of five years). The site was homesteaded by my great-grandparents in 1914. Today it consists of a half section or 320 acres which are undeveloped (i.e. no electricity or running water) with a small cabin and several outbuildings.
Natural Elements

Water

Water carves the site. It is the force which cuts and reveals. It creates and destroys. Erosion patterns indicate its presence. Deciduous plants mark the stream corridors. The stream corridors become the naturally occurring paths for animals and people.

Vegetation

Lichens cover the rocks slowly forming a niche where a seed takes root. Quaking Aspen line the stream corridors changing color with the cyclical seasons. Ponderosa Pines connect the earth to the sky.

Rock

Created by fire, revealed by water and covered with vegetation, the rock is the healed wound of the earth: a scar. Its presence dominates the site.
Location

The site is located south of Helena, Montana in rural Jefferson County. The grid represents one square mile sections.
Northwest view towards the rocks
Southeast view from the rocks
Gesture and Cropping as Working Method

The expressive use of the motion of the body as a means of conveying an idea, attitude, or emotion is a powerful tool. The study of gestures developed from an interest in photography. Understanding how space is activated and territory is defined evolved from “cropping” and “framing” photographs.
The Isenheim Altarpiece by Grünewald provides an excellent example of the dramatic use of gesture. The *Crucifixion* (detail left) reveals a scene by showing rather than by telling its stories. The curvature of the kneeling woman’s spine with her raised clasped hands and splayed fingers animates the scene in a way which is both seen and felt. Words are inadequate to convey the strength of the image.
As cropping can limit a photograph, time can limit a drawing. These thirty second gestural site sketches are about finding the essence of the place.
Analysis of the photographs and sketches provided a method to interpret the gesture in the landscape. Reading the topographical map as the abstraction of the erosion patterns was the fundamental understanding of the site. These erosion patterns are evidence of movement, the flow of water.

Cropping the site to frame the rock, the dominant feature, connects the revealing action of the water to a focal point that is simultaneously exposed.
Design Proposal

Ritual Elements

Path
Two types of paths exist. One type occurs naturally following the stream corridors. These paths are intensified by the additional planting of Quaking Aspen and the introduction of Lowbush Blueberries. These plants are selected for their suitability to the climate and terrain as well as for their color, shape, and texture. More importantly, the density of planting reinforces the definition of the paths, increases the diversity of species, and dramatically articulates seasonal change. In the fall the aspen leaves turn a bright golden yellow and the blueberry leaves a deep crimson signifying the reconciliation of fire and water.
The built path, like the water, carves the landscape. It is an injury to the land. It defines the ritual journey through the site. Movement on this path concerns itself with healing. Healing takes time. A small channel of water runs along the path symbolically keeping the cut open. An open wound is painful.

**Water**

Water creates and destroys. It directs the course of movement. Water reveals.
Wall
Walls frame the path. They are oriented according to the phenomena of the site. The structure of the walls serves as a reference to measure both distance and time. The intercolumnar rubble fill provides a framework for the intervention to heal. It is planted with Virginia Creeper. The passage of time and nature allow the wall to mend. Some scars are visible.

Bridge
The bridge provides passage across the stream corridor at its steepest point. It acts as the threshold between the profane world and the sacred world. Wooden decking amplifies footsteps crossing over the corridor through the tree tops.
Chapel
The chapel mediates earth and sky. Water reveals the chapel as it does the rock. The carved earth embraces and commemorates. The roof shelters and frames the sky.

Crematorium
The crematorium manifests the transformation of body to spirit. The chimney rises from the earth to celebrate the release of the spirit. The scaffolding like framework around the chimney represents the void or potential.
Columbarium
Light fills the niches until they are occupied. Topiary trellises planted with Virginia Creeper represent the healing process.

Angels
Angels are the messengers. They protect and give direction. They provide places to rest and points of reflection.
Columbarium Sections
The Palette of Materials

Man Made Materials
Materials are chosen both for the way they age and their tactile qualities.

Concrete
Concrete is the material of the earth. Its strength is in compression. It is used for the walls and the ground form of the chapel. It ages slowly and eventually breaks down to its constituent earth materials: aggregate and sand.

Steel
Highly reflective, steel is the material of the sky. Molten steel cast in forms works best in tension. It oxidizes with air and ages quickly. It is used as the frame for the bridge, the roof for the chapel, and the topiary frames on the walls.
Natural Materials
Plants are chosen for their form, shape, color, and transparency, as well as their suitability to the environment. They emphasize the articulation of seasonal change.

Quaking Aspen
Occurs naturally on the site. Quaking Aspen grow rapidly with a typical lifespan of 50 to 60 years. The leaves are light green in the spring, bright green in the summer, and bright yellow in autumn. The bark is white but shifts to brown-black in the older trunks. Quaking Aspen are columnar in form and range from 35 to 50 feet at maturity. The trees prefer to grow in stands. Its fruit ripens in May and is contained in a small conical capsule. Birds and small animals forage on it.

Ponderosa Pine
Indigenous species to the site. Ponderosa Pines are majestic evergreen trees. Peaking between 75 to 100 feet, their great height occasionally attracts lightning. The wildlife value is high with birds and other small animals who enjoy the pine cone seeds. They are a long lived species reaching maturity at 350 years although usually not surviving over 500 years.
Lowbush Blueberry
Selected for its species association with the Quaking Aspen, Lowbush Blueberry increases the biological diversity of the site. Lowbush Blueberry is a deciduous shrub with leaves that change from red green in the spring to blue green in the summer to a scarlet red in autumn. It is a fruit bearing plant and has a high wildlife value. Many species of birds and mammals relish the blueberry including people. Typically 2 to 3 feet in height, it is a short lived plant.

Virginia Creeper
As its name implies, Virginia Creeper is a climbing vine. It can grow up to 35 feet high and 20 to 35 feet wide. The foliage ranges from a red green in the spring to a dark green in the summer to a crimson or rose red in autumn. It is one of the earliest vines to change color in the fall. Its bluish black berries occur from late September sometimes lasting through February. Therefore, it has a high wildlife value particularly for birds. It is a long lived plant also contributing to the species diversity of the site.
Conclusion

What are the walls we leave behind? Architects have the responsibility to be clear about values manifested in their work. These values endure beyond the life of an architect and influence how people conduct everyday life as well as marking milestones. Monuments represent collective memory and act as a means of orientation. A monument is a built ritual. We need monuments that incorporate a range of readings and allow us to maintain rituals which confirm our values and add meaning to our lives.
Samantabhadra

Samantabhadra is the shining practice Bodhisattva. She turns meditation into action and dream into reality. We tend to think there is someone out there to help us do this, but unfolding the path completely depends on ourselves. When we become Samantabhadra herself we can freely ride this wheel of dharma and receive wonderful support from people, friends, and teachers.

Mayumi Oda
Wonderful support was received from the following teachers and friends:

**Ann Pendleton-Jullian** who held me to my desire to not do what I already knew how to do.

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**David, Albert, and Amin** all of whom I feel proud to call friends.

**Sam** who kept me smiling even when I didn’t feel like it.
Illustration Credits

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   Thanks Dad

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13. p. 14 U.S.G.S. Map

14. p. 15 photo by author

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40. p. 41 photo by author

41. p. 42 photo from *Goddesses*, p. 63.

42. p. 44 photo by author

43. p. 48 photo by author
Endnotes


8. Ibid., pp. 262 - 263.


10. Ibid., pp. 772 - 773.

Annotated Bibliography

Books


A recent thesis exploring similar issues.


Important reference book because of the many chapels and cemeteries he designed.


A visual reference particularly the details of the Brion-Vega Cemetery.

Specifically addresses the geologic history of Montana with an in depth discussion of the area surrounding the site. Good diagrams.


General interest overview of Montana describing the many forces which have shaped the state. Introduces notion of cultural vs. natural landscape. Many photographs.


A series of essays by farmer, poet, and philosopher Wendell Berry. Particularly helpful were the insightful essays titled “Damage” and “Healing”.


The latest and most thorough book on The Woodland Cemetery.

A seminal book on the manifestations of religion in terms of space, time, nature and the cosmos, and life itself. Important discussions on the principles of sacred space and sacred time making.


A history of cemetery development in Western civilization focusing on the Cemetery of Pere Lachaise in Paris, the first "rural /garden" cemetery. The rural cemetery movement in the United States was based on this example including Mount Auburn in Cambridge, MA.


A visual reference demonstrating a beautiful understanding and use of materials.


Covers basic geology terms such as the following: succession; disturbance; climax community; climate; and geomorphology.

A detailed analysis of a painting concentrating on religious imagery and meaning. The information about gestures, particularly of the hands is important.


Excellent reference book including beautifully drawn scaled illustrations of all the included species with larger scale details of leaves, berries, etc.


A study of American cemetery design. Many images of headstones and monuments which demonstrate a wide variety of cultural and social influences.

Specifically looked at the project La Sainte-Baume a scheme which was never realized for a Basilique, two hotels, and the Permanent City on a sacred site.

Lynch, Kevin., *What Time is this Place?* Cambridge: MIT Press, 1972

A thorough investigation into the many ways time is manifested in the environment.


Photographs of types of grave markers.


Introduces the notion of considering the effects of the aging of materials as part of the design process. Weathering of materials is one way to mark the passage of time in a building.

An insightful book on the nature of place.


A visual reference with beautiful colored pencil drawings as well as many inspiring quotes and anecdotes on garden types.


Line drawings and models. The Igualada Cemetery is particularly interesting.

Specifically read the chapter "Age and Artifact". addressing ideas about monuments and memorials in the landscape.


An anthology of short stories and essays about Montana including Native American stories, journals of exploration, stories of early pioneers, mining stories, agricultural stories, and modern fiction and poetry.

Tuan, Yi-Fu., Space and Place: The Perspective of Experience. Minneapolis: University of Minnesota, 1977

Specifically focused on four chapters: Mythical Space and Place; Architectural Space and Awareness; Time in Experiential Space; and Time and Place. Good discussion on the manifestation and understanding of time in architecture.

Describes life on the homestead including a brief section on burial practices.


Comprehensive history of mining in Montana. Specifically discusses areas adjacent to the site.

Periodicals


This analysis of Scarpa's Brion Tomb is primarily in terms of the narrative of the "garden" understood as a representation of a cultural "rite of passage" as well as its associated imagery and symbolism.