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I, ___________________________,

hereby submit this original work as part of the requirements for the degree of:

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Mountaintop Removal National Historical Park

Student Signature: ___________________________

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mountaintop removal national historical park

A Thesis Submitted to the Graduate school of the University of Cincinnati in partial fulfillment of the requirements for the

Master of Architecture: School of Architecture and Interior Design of the College of Design, Art, Architecture, and Planning

Committee:
First Chair, John Hancock
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May 27, 2009
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The Appalachian Mountains are being systematically demolished, resulting in the homogenizing of the region’s physical and architectural landscapes. This attempt at dominance has a detrimental effect on the history and longevity of the region’s culture. This thesis offers a constructive response to the devastating effects of mountaintop removal. Appalachian land and culture are intimately connected, and by utilizing aspects of the culture and the unique site situation this thesis promotes the need for architectural specificity that acknowledges both our destructive history with the land and also our reliance on it.

This project recognizes the reliance that Appalachians have on the natural resources that surround them, and their abhorrence of outsider influence. Sensitive awareness of the place ultimately helps in the attempt to translate the intangible qualities and dark poetics of the region into an architectural response. Five cultural themes are developed (history, ugliness, contrast, landscape, and narrative) which stimulate the use of the processes and remnants of the site to inform the design of a national historical park. The design fuses these contradictory cultural themes to create a tectonic architectural experience of heightened consciousness. An uncanny, sublime interaction with this horrific landscape, and an intimate engagement with the scars of the site, reveal the intrinsic bonds among all living things, and ultimately hope amidst the devastation.
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The Appalachian Mountains are being systematically demolished. The forested ridges and hollows of eastern Kentucky and West Virginia have become leveled remnants of the ancient mountains that used to envelop the region. The innate connection between human culture and landscape is constantly in flux, but with the practice of mountaintop removal, these processes have shifted toward a disrespectful and complete dominance that man has taken over the land. Mountaintop removal is the process of coal extraction that involves utter devastation: the eradication of old growth forests and ecologies, bulldozing of the top layers of rock and soil, filling streams and valleys with dangerous and toxic heavy metals, and using explosives to remove tons of earth, all to reach the coal seams lying beneath. This thesis proposes the Mountaintop Removal National Historical Park, to serve as a memorial to all mountains that have been lost through this invasive process. It will educate park visitors and the general
public about the history of mountaintop removal and its relationship to Appalachian history, mining, culture, and heritage. Experimenting with new and innovative ways in which to heal the wounds of the site is an integral part of the mission of this park. This monumentally tragic design situation calls for the architectural sublime, an awareness and recognition of both the natural beauty and horror of the setting.

Besides telling the story of mountaintop removal, there is a more complex task of clarifying the landscape within the larger context of Appalachian culture. Landscape architectural theorist James Corner compares the phenomena that help to articulate landscape as “posts that map” it.¹ The hermeneutic landscape is textual. It relies on being read through a combination of art, language, stories, and architecture, which help situate it within a recognizable context. An immersion into the culture has introduced some recurrent “posts” that help to map out a very distinct Appalachian landscape. The devises necessary to delineate an architectural language for this thesis include history as evident in the vernaculars of the region and the residua from the specific site; the ugliness of such residue in dealing with outsider fascination of the image of poverty; the stark contrast between the natural and the devastated landscape; the inherent dependence on that landscape; and the narratives necessary to tell these stories.

The built environment has an effect on the cultural aspects of a place. This invariably requires an acknowledgement of the social, economic, environmental, and historical specifics of a place. The constructed landscape of Appalachia plays an important role in the development and sustenance of the culture, as built spaces can encourage or discourage social creativity. The history of Appalachia relies heavily on buildings to convey a piece of the story of its past. History is entwined within the identity of a place and the people whose stories are an intrinsic part of the landscape.

Mary Hufford, the director of the Center for Folklore and Ethnography at the University of Pennsylvania, discusses the dual sides of progress within Appalachia and confronts the desire to move forward with “jobs,

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education, health care, economic development,” with the fear that doing so will result in a loss of “community values, uncommodified nature, and artistic wholeness.” Hufford argues that there is a need for interdisciplinary Critical Regionalism throughout Appalachia, which is generated through praising the individuality of Appalachians. The struggles that exist in Appalachia are numerous. While beauty is expressed by the regulated views within state parks, hidden moments throughout the countryside reek of devastation. Her critique of architects focuses on their attempts to ‘fix’ the culture and the tendency to romanticize or rationalize, all the while neglecting to focus on the region’s current strengths and people’s individuality that are currently sustaining Appalachia.

This hermeneutic landscape becomes a palimpsest that acknowledges the intrusive nature of architecture (and industry) in Appalachia through maintaining visible traces of its earlier form. Site residua tell the story of time, space, and tradition that situate us within the history of a landscape, particularly one that has been so violently scarred. We tend to rationalize and identify certain recurrent themes in order to enframe our situations within a place. This project translates the beauty and devastation of the current story of Appalachia into architecture, utilizing the aspects of the region that make it unique in an attempt to bring about awareness and admiration of a place that is quickly deteriorating.

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The visceral feelings Appalachians have toward home are intimately connected to physical and cultural characteristics of their environment. The profound experience of the ancient, forested mountains and the visual remnants of the region's romanticized culture provide clues of its ingrained history. The weathered barns gracefully sitting on gently sloping hills, contrasted with dilapidated mobile homes tucked between the mountains, hint at the complex stories necessary to understand the physical and social fabric of eastern Kentucky. The mysticism behind the relationship that the Appalachian residents have with the landscape comes from an intrinsic understanding of past and present.

"Eastern Kentucky is a place that survives because of, and in spite of, its landscape."

Hindman-Knott Co. Master Plan

.02 the region

HISTORY AND CULTURE OF APPALACHIA

The visceral feelings Appalachians have toward home are intimately connected to physical and cultural characteristics of their environment. The profound experience of the ancient, forested mountains and the visual remnants of the region’s romanticized culture provide clues of its ingrained history. The weathered barns gracefully sitting on gently sloping hills, contrasted with dilapidated mobile homes tucked between the mountains, hint at the complex stories necessary to understand the physical and social fabric of eastern Kentucky. The mysticism behind the relationship that the Appalachian residents have with the landscape comes from an intrinsic understanding of past and present.
The geology and geography of the Appalachian Mountains have everything to do with the current state of the place. The mountains themselves date as far back as three hundred million years when the oceanic plate, the lapetus, began colliding with and slowly sinking beneath the North American craton. Due to erosion over time, the range has been worn into the rolling hills and narrow valleys known today. This contemporary landscape undulates in soft, intimate curves, at a scale more proportionate to our own shapes and curves than the towering masses of younger mountain ranges.

The geography and age of the Appalachian Mountains have endowed the region with bituminous coal deposits nested below the surface of the mountaintops. This coal has powered and controlled the infrastructure, development, economic growth and diseconomy of much of eastern Kentucky. It sits in layers beneath rock and earth waiting to be extracted for the production of power, though at great cost to the people who live in and work around the mountains. The dust from working in the mines builds up in the lungs of miners, and the heavy metal residues from the cleaning process seep into their water supplies. The coal companies control elections and legislation meant to help alleviate these detrimental effects, resulting in a highly corrupt division of power within eastern Kentucky and West Virginia communities.
The continuous and unpredictable ridges and valleys of these mountains create a landscape that its people are unable to control. While the physical landscape of eastern Kentucky is a breathtaking visual image, coal companies have labeled it unsuitable for building. As David Leatherbarrow asserts in his book Leveling the Land, “Certainly it is true that landscapes lacking level can be aesthetically pleasing, yet they may well be only that, which is to say they may well be useless and unlivable.” Thus, the question of livability in the Appalachian Mountains has long been a topic of discourse about regional development. As a partial justification of their actions, these coal companies claim that the leveling of mountains is necessary for further land development.

The Appalachian region of Kentucky has a deep and rich history that is unique; the peculiarities of not just its geography but also the people who choose to live in the hills and hollers contribute to its resonant heritage. The men and women of Appalachia have been a part of the landscape for generations. The evolution of their migration in and around the valleys is an essential aspect in understanding the current situation of Appalachians as well as their connectedness to the place. The first European inhabitants of the region moved in and around the mountains, settling in the valleys and cuts in the land that allowed for easier building. They stayed close to

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the river valleys and creek beds for reasons of accessibility. This tendency to migrate to the flat riverbeds has resulted in the proclivity of contemporary Appalachians to live tucked within the crevices of the mountains, in hollows. The hollows of eastern Kentucky are cold, dark places tucked within the rolling mountains. The morning light struggles to creep over the peaks, and the evening sun is quick to abandon these hollows, yet these isolated places are part of what define eastern Kentucky’s uniqueness.

Adam Sharr in his book, *Heidegger’s Hut*[^4], identifies the complex relationships philosophy and creativity both share with geography. He discusses *heimat*, a dedication to home, while relating it to Heidegger’s differentiation of place, which is measured emotionally, in comparison to space, which is measured mathematically. Emotional connections to the region are rooted in the accumulation of memories from a lifetime of situations and instances within the place.

Appalachians are more than intimately integrated with their topography; they are one and the same. To take an Appalachian out of the place of Appalachia often disrupts their core until they are able to return. More than in most other regions, there is an innate, almost unavoidable connection and bond to home that is never lost. People often choose to return to their less commodified lives in Kentucky due to this dedication to place. Chris Offutt, a short story writer from the region, spoke of his ache for home in a radio interview when he said, “I was like an amputee feeling perpetual pain in my phantom limb.”[^5] The systematic destruction of the physical landscape of Appalachia cannot help but exacerbate this same mental disruption.

The counties of eastern Kentucky are some of the poorest in the nation, and certainly in the eastern half of the United States. The poverty of eastern Kentucky is both directly and indirectly related to the landscape. The social and economic problems that exist in the region are a part of a perpetual conversation that is either highly vocalized or purposefully ignored.

Advocates for the advancement of Appalachia desire the development of the region, and yet have been faced with great difficulty in successfully promoting these initiatives. They desire the benefits of 21st century technology, wondering how and why such a geographically beautiful place, full of some of the most interesting and strong-willed people, can remain so far behind within such a global force as the United States.

The consciousness of the poverty that permeates the region seems to cause observers either to be inundated with the struggles or to blatantly ignore its presence. Erik Reece translates these struggles into words, saying,

“What is remarkable about the ugliness of Appalachian poverty is its closeness and contrast to the spectacular mountains rising around it. If the day were not so nice, I might be chastened by the number of wooden crosses that each mark a spot where someone met a violent death. Take one of the poorest parts of the country, add to it alcohol and pills, hard curves and coal trucks, and what you get is a lot of little white crosses staggered along the roadside.”

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The haunting beauty of eastern Kentucky is made even more prominent by its natural undulations, and even more poignant by its controversial and devastating history.

There is a history of hardships in Appalachian Kentucky that have always fascinated and troubled outsiders. The images produced by the Farm Security Administration during the Great Depression of the 1930s, Lyndon B. Johnson’s War on Poverty, and Robert Kennedy’s visits in the 1960s, have turned the poverty of Appalachia into a visual experience that is haunting and unforgettable. While these programs intended to aid the people in need, there was no way to predict the detrimental effects they would have on the image of eastern Kentucky. Thus, in Appalachia the outsider must be cautious and curious upon entering the unknown world of the mountains. Given past objectifications, there is an innate aversion to any outsider’s attempts to intrude upon or impose beliefs onto the eastern Kentuckians. There is a long history of stereotyping and intervention that has left the region with a stigma of stubborn backwardness and an abject way of life.

During the Great Depression, when the Works Progress Administration and Farm Security Administration came into Kentucky and broadcast their poverty to the world, the images used to convey this became cultural icons that are still associated with the region today. These photographs have been both praised and criticized in the conversations about outsider effects and influences on the culture. At the time, the images by Walker Evans and other artists were considered essential documentations of an unknown and peripheral subculture of America that was suffering greatly from the effects of the Great Depression. The emergence of public interest in the welfare of these people put the spotlight on their daily lives and the hardships they faced without necessarily focusing on the context of their situation. In many cases, the documentation of the people who were at this time being distinguished as “Appalachian” accurately portrayed the realities facing the region. Unfortunately the interpreted meaning of such images can be biased if the viewer or observer is ill-informed. The images can often perpetuate stereotypes. In this case, they originated them. In other
instances, the images became representations, images so deeply associated with a regressive society that they, and the conditions they document, remain unshakable today.

Appalachia still suffers greatly from misrepresentation, geographic exploitation, insufficient health care, governmental disregard, and poor education. Degrading stereotypes abound, resulting in a lack of true understanding by outsiders. General definitions of Appalachia invariably include excerpts about both its long-term poverty and its distinctive folkways. The rich social, political, and geographic history of the region as a whole is too broad a topic and has too convoluted a story to cover in its entirety in this thesis. I will focus mainly on the question of where the architect, and architecture, fit amidst this story of a place full of mysticism, tradition, poverty, and cultural stigma. All these factors contribute to the abstract place-making of the intangible Appalachia, and the association of culture and physical landscape becomes an essential concern for any discourse on architecture in and for the region.
Place is a qualitative phenomenon that is so much more than an abstract location. Our existence in the world is experiential. Martin Heidegger discusses our life-world as a result of a series of pre-existing relationships, memories, and associations with things that have been subconsciously structured through intellectual constructs such as language or art. Already the things themselves bear meaning. He goes on to say, “everywhere, wherever and however we are related to beings of every kind, identity makes its claim upon us.” Merleau-Ponty elaborates on this by establishing that this visceral relationship with our life-world is physical. Our thoughts and feelings are directly in tune with our body’s interaction with place.

The phenomenon of place is the combination of the concrete aspects of our environment combined with the intangible qualitative associations with that environment. As Christian Norberg-Schulz writes, “together
these things determine an ‘environmental character’ which is the essence of place.” He also quotes Jean Piaget who says that, “human identity depends on growing up in a ‘characteristic’ environment.” Norberg-Schulz identifies the spirit of place, or Genius Loci, as a space of distinct character where life occurs. Man needs to be able to place himself within his environment, and in order to do so, the place must be identifiable and indicative of the larger context within which it is situated. To imagine an event or situation without reference to a locality is nearly impossible. Place, in other words, is a physical setting, bound together with the activities and the cultural and historical meanings associated with it and which help to give it identity.

Though widely shared within cultural groups, there are as many perceptions of place as there are people, as we enter through the threshold of place with our own preconceived notions. The threshold between inside and outside is a blurred boundary, according to geographer Edward Relph:

“To be inside a place empathetically is to understand that place as rich in meaning and hence to identify with it, for these meanings are not only linked to the experiences and symbols of those whose place it is, but also stem from one’s own experiences.”

A careful study, appreciation, and acceptance of eastern Kentucky through having an emotional and empathetic involvement are necessary in the attempt to sustain its cultural landscape. The fabric that makes up the place or genius loci of eastern Kentucky is a patchwork of pillaged land, strong-willed families, stained cities, hodgepodge construction, and rundown architecture. The details of its hidden hollows, its streams, forests, meadows, barns, farms, makeshift porches, and family structures contribute to the abstract concept of space and place in Appalachia.

An architect in Appalachia is inevitably a cultural invader. Architects inescapably become such invaders as they design buildings that fit within or interrupt the fabric of the pre-established place and its people. Architects

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9 Ibid, 5
10 Edward Relph, Place and Placelessness, 54-55.
have always struggled with the task of designing something of permanence within a society that will forever be affected by and forced to inhabit it. The existing fabric of these societies includes, to use Hassan Fathy’s words, “their habits and prejudices, their friendships and their feuds [in a] delicately balanced social organism intimately integrated with the topography.”\textsuperscript{11}

Architects also seek to design for places sympathetically in order to resist “the character of the present day environment [which] is usually distinguished by monotony,” and this lack of character “implies poverty of stimuli.”\textsuperscript{12}

Juhani Pallasmaa asks,

> “Has our technology advanced construction lost its capacity to create a sense of specificity and place? Are the unifying and alienating forces of scientific rationality, technological logic, accelerated mobility, globalized market, and a universal lifestyle transforming the geographic and cultural grounding of architecture into an impossibility?”\textsuperscript{13}

\textsuperscript{11} Hassan Fathy, \textit{Architecture for the Poor} (Chicago: University of Chicago Press, 1973), 17.
\textsuperscript{12} Christian Norberg-Shulz, \textit{Genius Loci}, 189
He cites Kevin Lynch’s view that poor imageability may cause emotional insecurity, fear, passivity, and reduced intellectual capacity. How can creativity and innovation exist within an environment of utter monotony? Pallasmaa writes, in a similar vein, “Our current industrialized and consumerist culture seems to erode the very ground of architectural specificity and leaves us unaccompanied in a desolate world.”\textsuperscript{14} The effects of globalization have impacted our local economies and politics as well as our architecture. It has been a vital chapter in the lives of many rural Americans who have come to capitalize on the accessibility of goods and knowledge.

In Appalachia, the ease and accessibility created by the universal market and big-box retail has dramatically altered their way of life. With this accessibility comes the erosion of the place of Appalachia, happening both through the destruction of the mountains and a reclamation process that creates only placeless and monotonous architecture. The land is used and discarded, given over to golf courses, big-box retailers, and industries. This homogenizing activity surrenders any meaningful response to the environment, both physically and culturally.

In a search for identity in a globalized world, the situation of Appalachian Kentucky calls also for a social awareness of the struggles of individual people, as well as the struggles that face the region as a whole.

\textsuperscript{14} Pallasmaa, Juhani. “Place and Image,” 30
Appalachia is still socially and culturally strong, yet these virtues have seen no transmission into architecture. The discourse of critical regionalism offers a way to think about this problem, by reaching beyond any simple quest for visual connection to the vernacular.

Using modern or universal techniques to retain regional architecture translates into a critically refreshed idea of place-making and identity. Tzonis and LeFaivre as well as Kenneth Frampton describe it as a self-conscious acknowledgement of physical and cultural surroundings together with an emphasis on modern technologies. Kenneth Frampton describes the combination of terms, explaining that regionalism is the historical evolution of vernacular over a long period of time, while taking a critical look at its place within contemporary architectural discourse.

Architects have long struggled with the intrusive effects of design on impoverished societies. In the early 1940s, architect Hassan Fathy embarked on a life-long pursuit to “build a village where the fellaheen would follow the way of life that I would like them to.” The impoverished agricultural laborers to which he refers needed help on many levels, only a small portion of which were architectural needs. A man not accustomed to the rural Egyptian life, he describes his distant love for the country as “a love for an idea, not for something I really knew.”

On a visit to Talkha, an agricultural town, his desire to help the fellaheen changed and intensified. After witnessing the “hopeless resignation of these peasants to their condition, their cramped and stunted view of life, their abject acceptance of the whole horrible situation… amid the wretched buildings,” Fathy began his pursuit for an Architecture for the Poor.

Fathy’s desire was to construct beautiful homes and buildings using modest materials and cheap construction techniques. He began with the masons of Egypt, learning of their abilities in mud brick construction that were comparable to the early and simple technologies of the Ancient

17 Hassan Fathy, Architecture for the Poor, 1.
18 Hassan Fathy, Architecture for the Poor, 1.
19 Hassan Fathy, Architecture for the Poor, 3.
Romans. He argued that contemporary architects used questionable techniques to build domes, vaults, and arches out of materials being shipped from Europe and elsewhere. They

“had devised all sorts of complicated methods for constructing vaults and domes...their solutions had ranged from odd-shaped bricks...through every variety of scaffolding, to the extreme expedient of blowing up a large balloon in the shape of the required dome and spraying concrete onto that.”

Fathy was able to find masons who could create these architectural feats with “nothing but an adze and a pair of hands.”20 Fathy learned through his study of the craftsmen’s building methods that this architecture was indeed possible. He could do it cheaply and efficiently, using the materials of his ancestors. He was able to create spaces that rivaled that of modern technology, but for a cost that was unimaginably low, unrivaled even today.

In Architecture for the Poor, Fathy openly admits the struggles of communicating with the bureaucracy and with the people in poverty. He discusses the difficulty in truly understanding the needs and desires of the people and convincing the bureaucracy that his designs would help elevate the situations of these people. Fathy’s disconnect with the traditions of impoverished communities rings true in the Appalachian culture of today:

“Tradition among the peasants is the only safeguard of their culture. They cannot discriminate between unfamiliar styles, and if they run off the rails of tradition they will inevitably meet disaster. Willfully to break a tradition in a basically traditional society like a peasant one is a kind of cultural murder, and the architect must respect the tradition he is invading.”21

Appalachians within Kentucky are currently suffering from this "cultural murder," with the destruction of their natural and architectural landscape. To avoid being part of the problem, architecture in Appalachia

20 Hassan Fathy, Architecture for the Poor, 11.
21 Hassan Fathy, Architecture for the Poor, 25.
must be cautious and curious. The architect must have the same delicate response as Fathy, when he was faced with the daunting task of relocating the Gournis:

“All these people, related in a complex web of blood and marriage ties, with their habits and prejudices, their friendships and their feuds—a delicately balanced social organism intimately integrated with the topography, with the very bricks and timber of the village—this whole society had, as it were, to be dismantled and put together again in another setting.”

Appalachians walk a fine line between holding true to their regional heritage and giving in to the global economy that supports them.

Much like Fathy, Samuel Mockbee devoted his short life to working with, and for, an impoverished culture of which he was always on the periphery. Mason’s Bend, Alabama, is one of the poorest communities in one of the poorest counties in the most affluent country in the world, a surviving remnant of the days of post-Civil-War Reconstruction. A charismatic Mockbee began the Rural Studio in a heroic yet humble attempt to right the wrongs that had been ingrained in Hale County. His elective course offered through Auburn University brought a very refreshing and honest architecture to the community, and new realizations to the sheltered, middle-class students who were eager to help. Mockbee insisted that “the architectural profession has an ethical responsibility to help improve living conditions for the poor… and to ‘challenge the status quo into making responsible environmental and social changes.’”

The needs of Mason’s Bend required a response that was innovative, frugal, and regional. The clients, who are predominantly African-Americans, cannot afford the exuberant spending to which architects have become accustomed. Yet, the Rural Studio continues to bring contemporary American architecture to a place in dire need, while teaching students about the real affects that architecture can have on people.

22 Hassan Fathy, Architecture for the Poor, 17.
Amidst the Ozark Mountains of Arkansas, Marlon Blackwell is designing low-budget, sustainable architecture. The Ozarks, like the Appalachian Mountains of Kentucky, are “a place of damp hollers, forests, and farms.”

Yet it is the epicenter of the new Wal-Mart nation. It is a place that to an outsider has an identity that is mistakable for anywhere else in the Midwest, yet is uniquely Fayetteville. Similar to many parts of Kentucky, the Ozarks are full of their own quirks. Designing small buildings and homes amidst Wal-Mart, religious kitsch, chicken houses, farms, and interstate tourist attractions, has proved an interesting task for Blackwell. Yet he finds a comforting challenge in designing for an area where he knows every twist and turn. With a sleek modern approach and a clever regional take, Blackwell successfully designs amidst the mountains. He has mastered architectural communication in the Ozarks by taking pride in the craftsman. He has found that the skill of local people should be exploited, as it is cheaper, faster, and more successful than other building methods.

In a conversation with educator and critic Dan Hoffman, Marlon Blackwell “pointed out that structures occurring in the so-called ‘low’ end of the economic spectrum were signified by assemblies made from a combination of ready-built components and handmade adjustments.”

Blackwell points out a mobile home as they pass it, an all-too-familiar scene to Appalachians, and he informs Hoffman that it was, “constructed in a factory, while its roughly built porch was obviously fabricated from scratch from a combination of purchased and scavenged material, the mark of the unpracticed hand clearly evident in the crude brace nailed to one of the corners.” Architecture does not always need to transcend these moments of sustenance, these opportunities grasped by the mobile home owner to maintain his or her home. Architects, however, “working close to the ground (or region) must find a way to knit together these diverse influences and tendencies, find a universal beat within the local grain,” Hoffman concludes.

25 Dan Hoffman, 25.
26 Dan Hoffman, 24.
The dichotomy between the rich natural resources of the mountains and the stark poverty that creeps into the valleys is an unsettling experience that seeps into the lives touched by these polarities, both locals and visitors alike. There has been a perpetual need for man to harness nature, a struggle to dominate it, and a proclivity to see the land as a supply for their demand. The economic model of many small coal towns in Appalachia rests on the hope that rich natural resources will lead to wealth. This is a flawed system because it creates a dependency on one natural resource to service the infrastructure of an entire region.
Coal mining is the most important economic force in eastern Kentucky. Yet it has long been the cause of struggles between worker and foreman, and the reliance on the coal industry has led to the diseconomy of the entire region. Moreover, mountaintop removal stands as an especially horrendous example of the proclivity for man to dominate nature and view it as what Martin Heidegger has termed, “standing reserve” and it is beginning to take its toll on the natural beauty and ecology of Appalachia.

The efficiency of strip mining for coal has become safer for the individual miners, but significantly more devastating to the landscape and the people who live below the peaks. The strong-armed process of strip mining shows the success and short sightedness of its advocates. What happens when there is no more coal, our over-consumptive society is grappling for other energy sources, and the mountain-less Appalachians are forever scarred? Appalachian Voices, one of the many organizations fighting mountaintop removal cites the US Geologic Survey as saying that, “In the northern and central Appalachian Basin coal regions… Sufficient high-quality, thick, bituminous resources remain in these beds and coal zones to last for the next one or two decades at current production.”

It is unsettling to experience the gradual conquering of these mountains. To conquer, coming from the Latin word *conquirere* from con- [expressing completion] –quaerere [to seek] means to overcome, but with respect to mountains this has two possible meanings: to climb to the summit, or to destroy. The mountains in Appalachia are being conquered (destroyed) to suit our needs, one explosive charge at a time. The destruction of entire ecologies and geographic formations is coupled with the suffering of people who are directly touched by this process. All of this is being sacrificed to satisfy the immediate needs of our consumer culture.

Strip mining, specifically mountaintop removal, or MTR, is a legal operation by which coal companies extract deposits hastily. The process

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28 http://www.appvoices.org/index.php?/mtr/myths_and_facts/
begins with the removal of all trees on the site. Federal law states that these trees must be logged and saved for future use. Unfortunately, coal companies often cut the trees with no regard for this and merely pile them up and burn them. This saves the coal companies time, money, and effort, but such short-sightedness is unacceptable. The conservation of wood for reuse (or resale) holds vast potential, yet it is burned to save a few paid hours of manpower.

In his book *Lost Mountain*, the journalist Erik Reece, describes his year spent continually climbing the mountain of the same name after it was destined for mountaintop removal destruction. It is because of this thorough documentation that Lost Mountain was chosen as the site for this thesis project. Reece documented how these companies get away with blatant disregard for the law, explaining that, “the problem, coalfield residents will tell you, is that all the inspections are announced, which makes it rather easy for a coal company to exceed the blasting limits as soon as the inspectors are gone.”

It becomes complicated when the government is supposed to impose restrictions on an industry that is doing something deemed necessary for the livelihood of the entire country. With MTR coal mines, the government announces its visits in order to make life simpler for the companies, which then adhere to the law for the time being, and

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resume their detrimental practices days later. Reece describes one moment of pure frustration as he exclaims, “Scalped is the word that keeps repeating itself in my notebook: This mountainside has been scalped. The trees that covered it now lie in massive piles all down the slope. The pile at the bottom has become a burning pyre, and a haze of smoke fills this concave southern valley. One dozer with its long crescent blade is slowly pushing the other piles down into the fire.”

In the practice of MTR, the coal that is craved sits underneath layers of topsoil and overburden that must be displaced. Overburden is the term used to describe the rock and soil that sit above the coal. The use of this type of terminology runs rampant through the discourse of coal mining. The unfortunate labeling of these natural instances, such as dirt and rock, redefines them as merely an encumbrance to the coal companies, and becomes another form of propaganda that circulates in the Appalachian coal towns. The term “overburden,” which by definition means “essential excessive strain” is a linguistic effort to devalue the natural terrain and geological formation of the site and landscape.

Explosives are used to uncover the coal seams sitting beneath the overburden, dropping the mountain’s height by as much as 1,000 vertical feet. This overburden is deemed useless and is either pushed or blown over into the valleys, resulting in the damming of streams and hollows. The topsoil is set aside for the later “reclamation” of the site. Because our society cannot seem to figure out a more sustainable and less disruptive method for extracting coal, this practice leaves rubble and ash to clog up the valley streams. Nebulous legislation attempts to confront the dispute over this material, yet remains vague in order to avoid the epic confrontation that would result if much of the country went without electricity. Reece explains that, “the Clean Water Act states that ‘fill material’ can be deposited in American waterways, but ‘waste’ cannot. A coal lobbyist declared waste associated with strip mining as ‘fill material.’” So their actions are deemed legal; the debates, meanwhile, persist.

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30 Erik Reece, *Lost Mountain*, 31-32
Following the explosions used for the more difficult tasks, draglines extract the coal. Once the coal is extracted, it must be cleaned, removing the excess minerals that are too toxic to burn. This ‘waste’ material, which is ambiguously defined, is deposited into pools or slurries. Slurries are filled with highly toxic minerals that have been dissolved through the washing process, including manganese, mercury, cadmium, arsenic, lime, and lead. Following the actual extraction of the coal, what remains of the mountaintop is spread with what is left of its topsoil and is reseeded. The reseeding of mountaintops is perturbing. Site “reclamation” is not about reclaiming the site for previously existing ecologies or landforms. Instead the reseeding process is a mechanical process whereby foreign grass species such as lespedeza are thrown on top of a flattened mountain in order to control erosion, with no regard or consideration for their impact on watershed, contamination, wildlife, views, uses, land sensitivity, or ecological sustainability. The argument that Appalachia is full of land that is unable to be built upon does not justify the razing of mountains, but instead challenges its society to be innovative with its development and construction.

These sites of devastation have been created through the destruction of

![Fig. 4.03 Slurry Impoundment at Brush Fork](image)
Kentucky’s natural landscape, and their reclamation results in the scarring of the region’s architectural landscape. Usually what happens is that the land, having been used and discarded by the mining process, is then populated by the placeless and monotonous architecture that has become the norm for so much of rural America. These immense industrial parks, warehouses, big-box retailers, and strip malls replace the natural slopes of the land, forlorn among the pathetic remnants of what used to exist. Reece talks about the most frequent mountaintop land use following the flattening of its form. “I pass an aluminum-sided warehouse that some company has already abandoned. A sign advertises 4100 square feet for rent. And then there is nothing. If I didn’t know where I was, I might guess I was driving across a flat Kansas wheat field…”

Though admirable in their attempts to bring infrastructure and economy to the isolated regions of eastern Kentucky, the region’s elected officials have yet to find an efficient means of attracting businesses and industry to the area. Reece goes on to explain that one specific “industrial park was created with over $21 million collected by the coal severance tax. The state levies a 4.5% tax on each ton of mined coal,” but the money
goes into a general state fund, not for specific counties. The money is then used to incite new industries to relocate to Kentucky with tax breaks and incentives. Unfortunately, this coal severance tax money runs dry within a year or two, leaving any new industry without monetary incentive to stay in a place that is lacking the infrastructure necessary for a successful business.

The effort to abolish mountaintop removal in Appalachia is an ongoing battle that is fought by non-profit organizations and the people whose homes and livelihoods are affected. Making the assumption that the fight may not end anytime soon, the now aptly named Lost Mountain could potentially become a haven where these organizations will locate, helping to make it a focus for all efforts seeking to draw attention to the problems of MTR. Artists, in particular, have an innate connection to their surroundings, and traditionally take part in the fight to sustain the honesty and integrity of their environment. The Penland School of Crafts, for example, is a place that acknowledges the craft artist’s connection to landscape, region, and heritage. This thesis design project envisions a collection of such groups and assumes that they will become a part of the reclaimed site. The perpetuity of the practice of mountaintop removal translates to the continuous need to restore, bury, interpret and reclaim the scarred landscape. Landscape is constantly changing, evolving, and weathering. But this landscape is envisioned here as the phenomenon by which the perpetuity of the struggle against mountaintop removal will be forever linked and interpreted.
In keeping with the National Park Service’s mission, the Mountaintop Removal National Historical Park will commemorate Lost Mountain, which will serve as a memorial to all mountains that have been lost through the invasive process of strip mining. It will educate park visitors and the general public about the history of mountaintop removal and Appalachian heritage. The park will serve as a place for fusing businesses, private organizations, and local, state, and federal governments in order to create a landscape that integrates social, economic, environmental, and ethical considerations both through the programmatic functions it serves as well as the individual experience offered to its visitors. Due to the detrimental effects that strip mining has on sites such as Lost Mountain, remediation is also necessary to improve upon site conditions. Experimenting with new and innovative ways by which to heal the wounds of the site is an integral
part of the mission of the Mountaintop Removal National Historical Park (MTR NHP). The perpetuity of the process, and the fight, translates into the continuous need to restore, bury, interpret and reclaim this scarred landscape. The informative exhibits are deliberately situated within a man-made gorge so as to offer specifically framed views, shelters, openings, sequences, and tunnels.

Eric Reece’s compelling book, previously referenced on account of its stories of so many lost mountains, played an instrumental role in the selection of Lost Mountain for this design thesis project. The irony of the mountain’s name links with the equally prescient name of its closest town, Hazard, Kentucky. Reece’s accurate chronicling of the history of the project site is useful in understanding the relationship that architecture can and should have with that history.

According to the currently available USGS topographic maps of Kentucky, Lost Mountain still stands at an elevation of 1847 feet. In actuality, as revealed by the aerial photography offered by more current online technologies, the site is now closer to 1480 feet above sea level. This estimate would indicate that the mountain has dropped almost 400 feet in height. It is important to note that though these aerial photographs provide the most current form of information, they still differ depending on the specific source. For instance, the images taken from Windows’ Live Maps show the scar of the site as about half the size as the images taken from The Commonwealth Map, indicating the impact of an on-going process.
My first visit to Hazard, Kentucky, in October, 2008, was an inundation for the senses, with images of asphalt roads and parking surrounding bargain shops and cheap aluminum-clad buildings, the taste and feel of dirt that clouds over everything, the smell of trucks and car exhaust, and the uncanny realization that all of this is resting rather cautiously on flattened, half-sized mountains whose peaks used to rise hundreds of feet higher.
Fig. 5.04 - Walmart, first trip

Fig. 5.05 - USGS Map

Fig. 5.06 - Hwy 80, first trip
My second visit, on January 23, 2009, offered an initial first-hand view of Lost Mountain and the visceral actualization of the scarred landscape that Reece described with the word scalped. Sneaking up a dirt road used only by coal industry trucks, and ignoring signs to ward off intruders, I was able to glimpse about one tenth of the massive site. An unnatural feeling of the wind whipping around, and the sun’s excessive reflection off of the dirt, were subtle indicators of the massive change that had occurred. Even scalped, the site still sits high above the surrounding valleys and hills, offering views for miles of both the splendor and the ruin that encompass the region.
Fig. 5.07 - Lost Mountain

Fig. 5.08 - Lost Mountain

Fig. 5.09 - Lost Mountain
James Corner discusses the role of residua as a catalyst for the “remembrance, renewal, and transfiguration of a culture's relationship to the land.” What Corner calls hermeneutic landscapes (such as Lost Mountain) present the opportunity to collage present with past, with the expectation of future weathering. Through overlaying our built environment with the existing site, our place within nature and the built world will be partly clarified. Post-industrial sites such as Lost Mountain offer myriad opportunities with which to frame the past and potential memories of place. The goals of site restoration and phytoremediation, the de-pollution of contaminated soil, need to make use of the post-industrial and manufactured site's relationship to memory.

*Landschaftspark Duisburgnord,* a landscape park in Germany, not only deals with sustaining the memory of a post-industrial site, but, through design, cleans the waste from it while bringing economic stimulus to the abandoned factory's town. Peter Latz's design uses the remnants of this place whose history has pre-established it as an ingrained aspect of the contexts within which it is situated. The cultural implications associated with the park have evolved from a sense of identity based on the economic relationship the site's industry once had to the surrounding town, to the strong sense of pride and ownership inherent in the reclamation of such a place that refuses to be forgotten. The desire to remediate the industrial waste on the site served as a catalyst for further transfiguration of the landscape. The sustenance, re-reading, and re-writing of the built environment as a sort of palimpsest provides the first layer in the ever-changing surface that becomes “a conceptual filter through which our relationships to wilderness and nature can be understood.”

D.I.R.T. Studio utilizes this same conceptual method for recovering sites that have been left behind following the heavy hand that the industrialized world has had on them. Their projects deal with the reclamation of old mining sites, railroad parks, quarries, etc., by keeping the residua of the machine's touch on the land as a tool for communication and design, rather
than as a layer of the story that requires an opaque covering. D.I.R.T. Studio accepts the unnatural site alterations, and works with the given landscape, reclaiming the land so that new ecologies can be sustained and no further damage to the surrounding ecologies can occur.

It has been widely acknowledged that once land has been disturbed beyond a certain point, the chance of nature taking its course and returning to its previous state is unlikely. The Environmental Protection Agency requires that mountaintop removal sites be returned to their original state, but each site’s biodiversity is forever affected by the extreme trauma. Indigenous trees are unable to grow back on these sites because the cyclical processes that nature relies on have collapsed: without trees the soil is too erosive and without sturdy soil, trees cannot grow. Also the types of animals that are unable to inhabit forested areas are rampant in these new prairie-like mountaintops and are detrimental for the replanting of trees.

At the building scale, the design program will address the issue of remembrance and awareness through its architectural treatment and by providing educational exhibit spaces. Like the Fernald Preserve Visitors Center, in Harrison, Ohio, (which tells the story of a former uranium foundry, its role in the Cold War, and its contamination and cleanup) the Mountaintop Removal National Historical Park on Lost Mountain is faced with the challenge of acknowledging and educating visitors about the detrimental practices that happened previously on the site. Mountaintop removal needs to be understood not only to prevent further destruction of landscapes, but also in order to acknowledge the hard working people whose livelihood depended on the income provided by the coal mining industry. The Fernald Visitor Center’s purpose is “to provide information and context on the remediation of the Fernald site, including information on site restrictions, ongoing maintenance and monitoring, residual risk information, and to fulfill an informational and educational function within the surrounding community.”

Like Fernald, Lost Mountain, and the Mountaintop Removal National Historical Park will provide similar information pertaining to the site’s similarly complex history and future.
In its extreme ugliness, the specific design situation of mountaintop removal in Appalachia calls for the architectural sublime. The uncanny is the rediscovery of something familiar that has been previously repressed, the uneasy recognition of the presence of an absence. This design creates awareness and recognition of the natural beauty and horror that surround and are part of the site. The dark poetics of the architectural, sculptural, and landscape aspects of the park present the ordinary, everyday qualities...
of the region in an atypical way. Acknowledging the peculiar, yet standard experience of driving into the site, I have slowly removed one’s senses through altering the density of vegetation, blocking sunlight as one ascends the dark entry drive, eventually surrounded by thick walls that block the noise and view from anywhere but straight ahead. Entering the site, the wind is felt, bringing with it the scent of the new landscape. Emerging from the dark forest into the barren site, the sun shines brightly, casting shadows on the parking lot, which has been carefully integrated into the existing rough terrain. The poetics of this phenomenological experience creates an uncanny relationship between man and environment.

The visitor’s center and exhibits are deliberately situated within a man-made gorge so as to offer specifically framed views, and close engagement with the left-over mining high walls. A thick linear gabion wall creates a
singular line through this gorge, making a visual connection that contrasts the rough man-made cuts in the earth and the artfully constructed wall made up of the same rough material. Cutting into the land, while keeping the height of the wall consistent, confuses our visual relationship to our surroundings. This thick wall serves as a consistent, continuous visual guide through the building, as slits in the exterior walls and earth bring in light and views to pull and transition one through the sequence of exhibit spaces. Moving from an exhibit on the geological history of the region and the site, through the story of mountaintop removal, a somber tone permeates the experience of this underground museum. Following the final exhibit, the gabion wall juts out, parallel to the slit in the mining high walls, pulling the visitor outside. Similar to how one enters the site, he/she ascends a path, using the wall as a guide, and, arriving at the termination of both the mining wall and the constructed gabion wall, is thrust into a vast, barren, unremediated. Dirt and coal dust are all that remain, as the wind whips
around without the protection of either trees or constructed walls, open to the forces of nature. The path returns through the man-made gorge, above the exhibits and onto a new undulating landscape, with scattered buildings resting lightly on the heavy masses of the museum. This second layer of the site includes a final exhibition space that elaborates on the new and innovative ways in which the site is being ‘healed.’ At a higher elevation than the exhibits below, the labs, offices, and café portion of the visitor’s center receive more even, consistent daylight. The interaction between separate buildings is much like the interaction between homes in a hollow, with the outdoor space acting as a living room, an extension of the porch. The phyto-remediation pools, testing new ways of cleaning the arsenic, mercury, lead, manganese, etc., from coal ash, sludge, and new soil, help articulate space within these outdoor “gardens,” leaving the visitor with a sense of hope.

The goal of the project is to translate the poetics of the story of Appalachia, including mining and MTR, into architecture, using thematic aspects of the region that make it unique in an attempt to bring about heightened awareness and understanding. This project expresses the immense respect and admiration I have for a culture that exists on the periphery of American society, but within the geographic realm that I call home. The world of Appalachia is a fascinating realm of mysticism, folklore, hardship, and beauty. These dark poetics are not romantic to every observer; some do not see the darkness that I see, and some do not read the histories as poetic. Still, the allure of this culture cannot be ignored. The theories of place and place-making that stem from phenomenology substantiate the relationship that architecture can share with such an enticing culture. The uncanny relationships that exist between the mysticism and folkloric aspects of this culture and the gritty, hard realities of the place are enthralling, particularly to an outside observer. This captivation further confuses the relationship between “insider” and “outsider” because, being conscious of the constant typecasting and judgement of one’s own culture will only erode the connection between that culture and everyone outside of it.
There are inherent objectifications that happen following the decision to *name* a culture or group, and a rift that inevitably results, separating the culture from the rest of society as a whole.

So besides telling the story of mountaintop removal, there is the more complex task of clarifying the landscape within the larger context of Appalachian culture. When James Corner discusses the *hermeneutic* landscape as being a palimpsest, he is recognizing a culture’s past and present relationship to the land and the place. He discusses the tendency for people to perceive the world and landscapes through the use of interventions: a combination of art, language, stories, and architecture. In an attempt to understand and study the beauty and tragedy that are the current state of Appalachia, countless cultural traits have revealed themselves. Specifically, five very general themes have recurred consistently, deeply engrained within stories, images, film, interviews, and personal experience. Though intentionally vague, they encompass a myriad of traits that are overarching and overlapping, and they can be broadly translated into physical form. The goal of this project is to translate the poetics of the story of Appalachia into architecture. This takes a step towards objectivism, yet the attempt here is to evoke the less tangible aspects of Appalachia through the design of the Mountaintop Removal National Historical Park (MTR NHP), intending that, as Edward Relph put it, “if we ourselves are open to impression and sympathetically inclined, the place will open up and reveal its true essence.”36

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36 Edward Relph, *Place and Placelessness*, 56.
Fig. 6.07 Pedreres de s’hostal quarry

Fig. 6.08 Pedreres de s’hostal, blade marks
The first of these themes is history, which, in architectural terms, is often most prominent in the physical elements that stand as its remnants, such as vernacular buildings. History becomes an important theme because of the relevance that tradition has amongst impoverished societies. Tradition within this culture is almost a tangible thing. People grasp onto it, because often it is the only thing that holds true. It is the concept of history that I am focusing on, not the vernacular design per se or the history of architecture in Appalachia. Historically, Appalachians crafted their buildings out of necessity with readily available materials and tools. The design and construction of the log cabins and barns came from astute responses that the people had to their forested environment, combined with the ingrained building practices that had been a tradition. These buildings depended on the simple glue of gravity and compression to hold them together rather than the fasteners and hardware required today. The craftsmen skillfully cut and notched wood in fundamental ways that were beautiful for their simplicity. The specific saw cuts used for stacking logs were based on a frugal use and reuse of the material. These traditions have mostly been lost.

Appreciation for the simplicity, stability, authenticity, and permanence of such vernacular buildings can be expressed through contemporary design. Maya Lin’s Langston Hughes Library in Clinton, Tennessee, elegantly translates the discernible traditional building technologies of a double crib barn into an exquisite celebration of modern materials and their properties. By creating a sleek glass and steel box that carries the heavy members, she creates a new appreciation for a historic image. The design accentuates contemporary building technologies by wrapping the new building with the same traditional thick timber, while steel rods allow it to hover virtually weightless.

The scrupulous construction methods that were entrenched within the Appalachian vernacular have been lost on our global society that now glorifies the impermanence and mobility of modern structures. The contemporary vernacular architecture of eastern Kentucky is the mobile
home that sits on cinder blocks, the aluminum-sided strip mall surrounded by a sea of parking, or even the fake log cabins that imitate the iconic, historic image of Kentucky. The ugliness of the contemporary American landscape should not be ignored, just as the tragic history of the degradation of Lost Mountain must be revealed.

The methods and the thought processes that Appalachians traditionally had when constructing buildings is the same general method being used for this design. The warped practice of strip mining seems regressive compared to the original tradition of utilizing every scrap of material in order to make something steadfast. Generally speaking, a building that is conscious of a region’s traditions is focused on the notion of collapsing the distinction between high style and vernacular. The economic, cultural, and political meanings that are inherent with the decision to construct this historical park is in itself a deliberate focus on the history of Appalachia (geologically and culturally), the history of coal mining, and particularly the history of the specific site. The exhibits will speak of this history.

The mass amount of waste produced just from this site, offers an immense supply of building materials that not only chronicles Lost Mountain’s past, but also hints at the building methods of former times. The Visitor’s Center’s dark concrete floors are made with a noticeable amount of fly ash from coal burning power plants. The rubble or “fly rock” that is blown through to reach the seams of coal underneath make perfect rocks for the gabion/rock wall that cuts through the building. The exterior walls and sculptures of rammed earth are gracefully constructed from the tons of overburden that have been shoveled aside by the draglines. The trees that were logged have been cut into structural members. The metal siding that is in excess throughout the region and often used in the temporary structures built on site, becomes the formwork for the rammed earth, indicating man’s touch on the land. It is then reused for shelter, railings, and shading devices that are essentially the additive elements of the structure.
UGLINESS

Fig. 6.13 Condo Conversion

Fig. 6.14 drainage
The second cultural theme informing the design, and perhaps most easily translated into architecture, is “ugliness” with which outsiders seem to have had a particular fascination. The dilapidated homes and dirty faces of eastern Kentucky have inevitably affected the people who have formed an aversion to outside observation. Walker Evans, a photographer for the Farm Security Administration of the 1930s, and James Agee, his accompanying journalist, discussed through poetic writing and powerful photography the impact of their interpretations, as outsiders, of the poverty of the Great Depression. The draw they felt as strangers to frame the ugliness or the poverty that they saw was so intense, that at the time they were unaware of the impact they were having on the rural Americans they were depicting. The guilt came later, once they were able to reevaluate their positions within the context. James Agee, in his book *Let us now Praise Famous Men*, takes a moment to reflect on the notion of “beauty.” He discusses the “moral problems in evaluating” the beauty of the home where he stayed. He questions, “are things ‘beautiful’ which are not intended as such, but which are created in convergences of chance, need, innocence or ignorance, and for entirely irrelevant purposes?” He finishes the note on ‘beauty’ by describing a partition in one bedroom as “a great tragic poem.” His words indicate a very notable dichotomy within Appalachia. This notion of “beauty” and “ugliness” in impoverished areas creates an interesting relationship between the people who find the hodgepodge construction and dilapidated materials beautiful and those who choose to ignore or hide them because of their ugliness. This further distorts the relationships among outsiders and insiders, heightening its complexity.

*Stranger with a Camera* (2000) is an Appalshop documentary that tells the story of the murder of a famous Canadian documentary filmmaker in the 1960s, while he was photographing a dilapidated home in eastern Kentucky, fascinated by the image of poverty. The local reaction of sympathy

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38 James Agee and Walker Evans, 204.
39 James Agee and Walker Evans, 204.
toward the man who committed the crime is the most telling aspect in this unfortunate story of the lure of the strange, the “ugly,” or unknown. These unsettling moments should not be ignored, nor exposed without context, but should be looked upon as vital components for interpreting the surreal qualities and juxtapositions that are a part of Appalachia.

Shelby Lee Adams is a contemporary photographer from an upper middle class family in eastern Kentucky. His subject matter is a collection of Kentucky families who represent the extreme cases of poverty and neglect in Appalachia. He delves into the farthest reaches of the hollers and the most isolated of households, befriending and photographing the people that most of Kentucky tries to forget and deny. He has been both praised and criticized for his exploitation of the culture and its poverty. Many Kentuckians argue that the artistic elite condescendingly observe these images at art shows and immediately form under-educated opinions of the people they portray. The mayor of Hazard, Kentucky comments on Adam’s work, saying that if he chose to look under a few rocks, he would probably find similar people, but that the resulting photographs are a detriment to the state and region as a whole.40 It is undeniable that the images are both powerful and come from a highly skilled photographer,

yet according to his many critics, they cannot be read by the ill-informed people who they are meant to represent. Adams’ admirers, which include the families he photographs, profess that he is exposing hardships that are still a part of this country.

Understanding the criticism and praise of Adams’ work is important in evaluating the role of an architect in the sensitive circumstances that surround Appalachia. The allure of the image of Appalachian poverty is not easily repressed; it is too captivating to the observer. The beauty that is seen in the chipped paint, the rusting metal, and the hard faces seduce the photographer, the poet, the artist, and the architect, and is exposed through the photographic works of people like J. Henry Fair and Edward Burtynsky, whose vivid colors and startling images translate the ugliness of pollution and mining into fascinating imagery.
There is a fine line between the undisputed allure of images offered by these photographers and the questionably disturbing subjects they portray. In architectural terms, materials deemed unsightly or unpleasant based on societal constructs, the preconceived ideas with which we enter a situation, can be transformed into artfully crafted elements necessary to the experience of the built environment. Our predisposed associations with the ugliness of certain ordinary materials can thus be exposed by creating an obvious contrast between the rough texture or raw qualities of a material, and an artful interpretation of its form. The skillful treatment of Corten steel, for example, juxtaposed against the rough earthen walls at the Igualada Cemetery designed by Enric Miralles and Carme Pinos, offers an opportunity to reevaluate our mental associations with such a material. The rough steel cages of the gabion wall tuck gracefully behind the smooth concrete, again juxtaposing textures and materials assumed to be less “beautiful.” The stains left behind on the rocks by the steel
cages and Corten create dynamic images of materials that would otherwise go unnoticed or unacknowledged. The “beautiful” is made through the creative use of the “ugly.”

It is often left to opinion whether something is beautiful or ugly, yet in high architectural design, often the reuse of waste material or the artful detailing of a material deemed useless or ugly, makes it beautiful. In this case, both the use of salvaged materials and the artful interpretation of metal siding as something other than its generic use delve into this question of beauty. Phytoremediation, which is the use of plants to remediate the toxic waste leftover on the site, is a way of making something horrible become good. The decision to leave part of the site at the barren stage before reseeding brings into focus the ugliness of the practice of mountaintop removal. This decision also focuses on the ugly history of the site.
CONTRAST

Fig. 6.25 earthwork in quarry
A third interpretive theme, contrast, is again a very general concept focusing on the recurrence of unnatural or uncanny juxtapositions that are prevalent throughout the region. The contrast between the beauty of the landscape and the harsh poverty, or the devastation caused by mountaintop removal, or the homogenous architectural landscape that sits below these breathtaking mountains, are only a few of the constant disparities in Appalachia. Architecture can create a visceral juxtaposition that is similar to the visual contrast seen between the natural beauty of the land and the harsh poverty of the people. Just as significant as the detail of materials is the awareness of something brought forth through the less subtle existence of tension and opposition.

On the site of Villa Savoye, Le Corbusier spoke of a rock that stood vertically in contrast with the horizon. “…the vertical gives the meaning of the horizontal. One is alive because of the other.”41 The goal of revealing the potential of this landscape to the undiscerning audience, while also unveiling the harsh exploitation of its resources, is one that will require this sort of dichotomy. Often in order for nature to present itself, it must be re-presented in a new way.

The Esacio Escultorico in Mexico City offers a powerful experience of the landscape by contrasting man-made forms against the unpredictable rough earth below. This sculptural landscape is comprised of concrete slabs each carefully placed and angled upward toward the center of a perfect circle. These identical pieces represent the repetition of the industrial process necessary in order for man to be able to emulate the pure forms that are a part of nature. The ideal shape of the circle juxtaposed against the irregular forms of nature that encompass it and are encompassed by it create opportunities to both observe and experience one’s relationship to the natural world.

41 Leatherbarrow, David. “Leveling the Land,” 185
Allied Works’ Mary Hill Overlook located at the Columbia River Gorge sits as an object in its vast and barren surroundings. The overlook is intended to be a place from which to experience and appreciate the Columbia River Gorge and become a part of the natural through being a part of something that is obviously man-made.

“*The project is formed by a single ribbon of concrete that emerges from the earth and moves across the landscape, enfolding volumes that open and close to the sky. These simple volumes are marked with openings that establish specific references in the surrounding landscape. Rather than attempt to control and scale this vast space, the project marks the landscape with an experiential aperture that the overlook transforms in response to the shifting quality of light and changing points of view.*”

www.alliedworks.com
In the MTR NHP Visitor’s Center design, a powerful tension is created simply by framing the distant view of what is left of the mountains between two towering cliffs. Spaces are formed by walls, which contrast the qualities of man-made construction and the natural formations of the land. The thick linear gabion wall creates a singular line through this gorge, making a visual connection that contrasts the rough man-made cuts in the earth and the artfully constructed wall made up of the same rough material. Carving into the earth formed the walls of the gorge, whereas building back up of the earth forms the gabion wall and the rammed earth walls. Shifting and dynamic daylight affects the space within the gorge, creating contrast between dark and light. The dichotomy between the dark, somber tone of the exhibit spaces below and the light, optimistic tone of the labs and gardens above create contrast even within the program. The massive mining high walls tower over the intimate building and the sloped rammed earth sculpture walls, stressing the distinction between scales.

Fig. 6.31 plan diagram
Fig. 6.32 rock walls
Fig. 6.33 Michael Heizer, *Double Negative*
A fourth theme in the interpretation of Appalachia is landscape. This contrast between the big mining cliffs, and the smaller earthen architectural features, plays an important role in heightening the relationship that man has to the landscape, both at an intimate scale and a vast, overwhelming scale. Landscape is a frequent trait that surfaces as an underlying thread engrained in Appalachian folklore, myth, and legend. The stories told through generations discuss both the gentle and brutal aspects of nature. The home remedies that come from things provided by the earth, the clandestine niches deep in the hills, the hollers tucked within the crevices in the mountains, and the innate knowledge of the curves of the land and whims of nature, all speak to the intrinsic connection that is shared with the Appalachian landscape. The intimate scale of the mountains is often the justification for this intuitive bond.

Earth artists such as Michael Heizer have been forcing us to reevaluate our relationship to the land since the 1960s. The immense scale of Double Negative, Heizer’s project that sliced a canyon directly into the desert, causes one to acknowledge our mechanical view of nature. The capabilities we have to cut into the earth, to sever our ties to the topography and literally to move mountains, does not justify the decision to do these things. Heizer unveiled the vast impact we have on the earth. The obvious contrast that is evident in his projects can be used to reveal the connection to the environment that is so essential to being an Appalachian. The destruction that is happening to the Appalachian Mountains is literally severing the deep-rooted ties that are shared between the mountains and the people who call them home.

The deep, innate bond between man and earth in Appalachia is also in part due to the intimate scale of these mountains. Maya Lin’s Wave

Fig. 6.34 Maya Lin, Wave Fields

Fig. 6.35 Maya Lin, Vietnam Memorial
Field sculptures open this question of scale by molding the earth to create little pockets of land that hug the person experiencing the site. The sheer quantity of these consistent, undulating waves that Lin has sculpted across the vast landscape accentuate our technological capabilities, while the closeness of each wave gives one the ability to contextualize their existence within the landscape. In the same sense, she creates a sublime relationship between man and land, in her Vietnam Memorial in Washington, D.C. By cutting into the land, while keeping the height of the wall consistent, Lin confuses the connection that we are able to make visually with our surroundings. By accepting this relationship through our knowledge and our other senses, we are even more connected to our landscape.

James Turrell goes one step further, using the landscape of Roden Crater to create a narrative that removes one’s ability to contextualize their cognitive existence within the landscape by creating a relationship that relies on intuition. He removes all senses through the underground entrance into the eye of the crater, reintroducing the sky at the center, powerfully revealing the parallels between earth and sky. The poetics of this phenomenological experience of space create an uncanny relationship between man and environment.
Locating the Mountaintop Removal National Historical Park Visitor’s Center within a man-made gorge (that has become an unintentional piece of art) allows for a direct relationship to the scar caused by our industrial society. A long path slowly descends toward the building’s entry. The transitions between interior and exterior spaces, the use of the mining high walls to hold exhibits, and the constantly changing experience of the natural/unnatural landscape accentuate the relationships with it. Courtyards that cut into the building, open to above, are disorienting as the high walls of the gorge eclipse the view of anything but the sky. All of the building materials focus on the infinite possibilities the earth has to offer.
Fig. 6.38 Punta Pite

Fig. 6.39 Punta Pite
The fifth and final theme in the interpretation of Appalachia is the use of narrative to tell the stories that encompass this assemblage of themes. Appalachians and architects alike have the ability to weave narratives. Perhaps the most widely acknowledged trait of the stereotypical Appalachian is their ability to tell stories. The way to understand the dynamics of Appalachian families and towns is through the stories told, accepting that farfetched exaggerations are mixed in with subtle truths, and it is just as important to know how to read the storyteller as it is to read the story.

Alvaro Siza uses subliminal methods to retell the story of landscape at the Leca Swimming Pools in Portugal. He slowly removes one’s senses through the sequences of spaces that follow a decision by the user to leave the cacophony at street level. The sunlight is blocked as one descends the dark stairway, surrounded by thick walls that close out the noise and smells from above. Entering the site, the wind is felt, bringing with it the scent of salty sea air. Emerging from the dark hallway, the sun shines brightly, casting shadows on the pools, which have been carefully integrated into the existing rough terrain. Environmental storytelling like this is a talent reserved for the designer who can carefully re-introduce the world we thought we understood.

In Appalachia, stories change each time they are told, as the narrator becomes the author of the story. Histories are forgotten, yet the exaggeration of their history is part of the true story of Appalachians. Chris Offutt is a highly admired and respected author who portrays Appalachia in his hauntingly accurate short stories. He has the ability to focus in on the details of life without romanticizing or exaggerating. These details become the bigger picture, and the rawness of Appalachia is understood. Offutt’s writing does little to sentimentalize a culture that is defined by folklore, mysticism, mythology, and an identity set in place by outsiders. The short stories in Kentucky Straight, present emotional and riveting portrayals of the realities of an essentially unmapped world, yet without trivializing or accentuating that world’s poverty, ignorance, violence, and
daily struggles. He successfully reveals these things and more in raw form. His fear of being perceived as an outsider was never warranted, due to the unapologetic, blatant honesty of his writing. Translating the honesty of Offutt’s writings into built form is the challenge of an architect who intends to reveal the story of the landscape in an equally raw form. Without words, the architect must use form and interpretation to reveal these things. David Leatherbarrow proposes that through veiling, or rather interpreting, this landscape, the truth will be unveiled. Because the thing is inaccessible, “every interpretation or disclosure presents itself through its own lens or framework.”

Offutt’s lens is a careful construction of each fictional character that encompasses a variety of persistent traits. In so doing he paints a portrait of the culture as a whole by honing in on its details. Architecture too can reveal the significance of the whole through the detail. Carlo Scarpa is the master of creating stories through the design of details, masterfully leading one through sequences of spaces at the Brion Cemetery, for example, rigorously using the details of material connections as spaces interlock. Thresholds become opportunities to expose qualities of light, materials, and form, constantly telling the story of the space as it is being explored.

Using a contradictory method of detailing, Lars Vilks’ Nimis driftwood sculpture in Ladonia, near Kullaberg Nature Reserve, Sweden, creates a sequence of spaces and subtly frames views that are only noticed when there is a decision to pause. His rude joints connecting the found driftwood pieces to each other, offer an effect similar to Scarpa’s careful detailing. The inconsequential spaces left between the pieces of wood simultaneously frame and block views. Looking at and looking through become key factors in the experience of the Swedish landscape and the sea beyond.

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43 Leatherbarrow, David. “Leveling the Land.” 175
Designing the entire sequence of the site as a path creates a narrative. Both subtle and drastic changes in vegetation, topography, enclosure, and material selection and treatment immerse the visitor into the site as well as the story of Lost Mountain, utilizing storytelling to create an enveloping architectural experience. Once inside the building, slits in the exterior walls and earth use light and views to pull and transition one through the sequence of exhibit spaces. An uncanny, sublime interaction with this horrific landscape, and an intimate engagement with the scars of the site, reveal the intrinsic bonds among all living things, and ultimately hope amidst the devastation.

The ethereal qualities of the Appalachian culture require an architecture that combines these myriad aspects. It must acknowledge the realities and the possibilities, the histories and the exaggerations, the contrasts and the continuities, the ugliness and the beauty, the strength in character and the weakness to change, the deep connection to the landscape and the proclivity to destroy it, the rich resources and the impoverished families, the truths and the myths of their narratives, and the historic and contemporary built environment that encompasses all of it.


Lardner/Klein Landscape Architects. *Hindman-Knott County Master Plan.* Hindman, Kentucky.


