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It is entitled:
De_Fragmentation: Translating the Ruinous Narrative in Adaptive Reuse Design

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De_Fragmentation: Translating the Ruinous Narrative
In Adaptive Reuse Design

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Abstract

Adaptive reuse projects of abandoned buildings sometimes deny parts of the building’s past perceived as corrupt or less than acceptable in either its physical state or in the psychological perceptions projected onto the building by society. Attempting to integrate both the occupied and vacant phases of a building’s history as well as the memory of “place” can lead to a more holistic narrative to the building. How can a building or site widely accepted by the community as personifying the quality of “corrupt” be repurposed into a beneficial and productive place once again? Elements and ideas from the dilapidated state and memories can inform a new design for a building as it enters its third stage of life: reuse. The building represents a built construct developed out of the needs and times of society and these changes can add layers and dimensions to the reading and narrative of the building. By studying design projects by Peter Zumthor, Peter Latz, and other designers that are appropriate to this query, a strategy will be implemented for an abandoned warehouse in Toledo, Ohio that is unwanted by the community for the vandalism and crime associated with the site.
de_Fragmentation: Translating the Ruinous Narrative in Adaptive Reuse Design

Kelly Ronda
MArch Class of 2011
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3.2 Ibid., 26.
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9 // Neglected Narratives of Ruins
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9.8 Ibid., 122.

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12.2 Ibid.
12.11 Ibid., 98.
12.12 Ibid., 99.
12.15 Ibid., 88.
12.16 Ibid., 95.
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14 // Conclusion
Sapulpa is a small city on the southwest outskirt of Tulsa, Oklahoma and is located at the intersection of two major highways: U.S. 66 and U.S. 75, giving the city its nickname, “The Crossroads of America.” Sapulpa saw a large population increase between 1900 and 1930 when the city’s population increased from 900 residents to over 11,000 residents. This large population spike is mostly attributed to the discovery of oil in the area. The abundance of natural gas enticed glass-manufacturing plants to take root in the community. The Route 66 travelers and the railroad also contributed to downtown Sapulpa’s maturation from a town to a small thriving city. Many of the city’s downtown buildings were constructed during the early 1920’s economic boom.1

The Wells Building, formerly known as the Clayton Building, is one such building built in downtown Sapulpa during the boom. Commissioned in 1917, the five-story building contained the offices for many of the town’s prominent doctors and lawyers. Similar to the other downtown buildings along Dewey Avenue, the Wells Building also had brick masonry construction that formed a seemingly congruous cityscape.

1 http://www.sapulpahistoricalsociety.com/

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>% +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>891</td>
<td>-</td>
</tr>
<tr>
<td>1910</td>
<td>8,283</td>
<td>929 %</td>
</tr>
<tr>
<td>1920</td>
<td>11,634</td>
<td>140 %</td>
</tr>
<tr>
<td>1930</td>
<td>10,533</td>
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By the 1960’s, large malls began cropping up in suburban communities and became new consumer destinations leaving downtown shopping districts across America increasingly obsolete. In order to combat the mass interest and migration to the new modern shopping malls outside of town, the city of Sapulpa motioned its own modernization initiative to update some of its downtown buildings in hopes of retaining and attracting new customers to its central economic district. The Wells Building was one of the structures included in this new “façade-lift” remodeling program. The building’s brick was completely covered by concrete paneling and only the street-level windows were left exposed. The blocky form and raw concrete façade were clearly influenced by the brutalist architectural style that was popularized from the 1950’s to the mid-1970’s. The Wells Building, now stood out as a modernist emergence among the more traditional masonry buildings in the downtown district.

Le Corbusier was one of the most instrumental designers of the brutalist architectural movement. He described the concrete work of his Unite d’Habitation in Marseilles, France as “béton brut” or raw concrete. Beton-brut became a key phrase coined by British architects Alison and Peter Smithson, the couple typically accredited with classifying the key components of the brutalist style. Unite d’Habitation, constructed from 1947-1952, is widely renowned as the first brutalist building. Besides the material and formal characteristics associated with brutalist architecture, the philosophy behind the movement was to design structures that represented strength, security, and stabilization in a post-war era riddled plagued by fear and uncertainty. The brutalist ideology spread to future architecture projects.

2 Kevin Canfield, “INCOG is Leading the way in Sapulpa Building Renovation”
3 John Brock, “History Exposed at Wells Building”
throughout Europe and extended its influence into the United States. As with many architecture movements, styles flourish during one era and decline in the next and Brutalism was no exception. Today, brutalist-style buildings are often criticized for their seemingly “alien” or out-of-place aesthetic. Theodore Dalrymple, a writer and physician published the article, “The Architect as Totalitarian” in which he denounced Le Corbusier’s brutalist architecture as “soulless” and “monstrous.” Dalrymple wrote, “A single one of his buildings, or one inspired by him, could ruin the harmony of an entire townscape…A Corbusian building is incompatible with anything except itself.”

More than forty years after the re-façade initiative, Sapulpa once again was faced with the issue of depopulation. The brutalist version of the Wells Building was mostly vacant save for about one dozen tenants composed of lawyers, accountants, and insurance agents. In 2008, the Sapulpa Main Street Committee launched another revitalization program in hopes of attracting residents, retailers, and investors back in to the city’s desolate historic downtown. This program called for the removal of the “modern” facades erected in the 1960’s in order to unveil the original brick masonry of the buildings. The real estate firm Metro Plains LLC based out of North Dakota, took on the Wells Building renovation project. John Errigo, the project manager, said, “We believe that this building, once the false facades are removed and the restoration is complete, will be a contributing structure to the Downtown Historic District.”

The six-million dollar project, originally slated to open in the summer of 2009, proposed converting the office building into 32 senior-citizen living units, as well as rentable office and retail spaces at the street level.

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6 Theodore Dalrymple, “The Architect as Totalitarian”
7 John Brock, “History Exposed at Wells Building”
Following the renovation process, the exterior of the Wells Building appears just like the photographs of its original 1917 design. All of the 1960’s concrete façade has been removed and no traces of its existence can be found. One might unknowingly presume that the building has always looked like its original design and would have no evidence that the brutalist architectural movement had ever reached the city of Salpulpa. The inside, however, has been completely adapted for its new program and tenants. The grand opening of the new Wells Building Apartments occurred on January 21, 2011.

Robert Evatt, “Sapulpa’s Wells Building Receives $6 Million Overhaul”
The histories we as a society have descended from shape today’s cultures and transform our built environments. All societies are products of causal and effectual changes over time. Our ability to learn from the past allows us to develop a more conscious awareness of the world, relationships, and systems around us and informs our ideas and societal values. Architecture is a three-dimensional medium in which these ideas and values can be visually and spatially expressed. As our needs and priorities evolve over time, we analyze the existing conditions and determine what types of interventions will be necessary to meet our current needs or uphold our value system. These manipulations include tearing down structures, building new ones, and modifying existing ones. The addition, subtraction, or alteration, to an existing building inherently changes the way it is utilized by society as well as its historical narrative. Elements of that building’s historical narrative become lost as changes are implemented. By neglecting part of a building’s narrative whether viewed as favorable or unfavorable, we as a society are actively or unconsciously erasing a part of our own history.

In the Wells Building case study referred to in the preface, the townspeople considered the building’s 1960’s façade as an inappropriate and undesirable aesthetic based on their current values. The façade modification was initially a response to the changing social values that had an increasing affinity for the modernist aesthetic. The Main Street Committee’s proposal to remove the building’s “false façade” to unveil the original surface treatment was an attempt to recreate its 1920’s small town nostalgia, in which they believed would appeal to a broader range of people than the brutalist-inspired facade they perceived as drab and out-of-date. The residents’ longing to return to a more prosperous era of the city’s past has taken precedence over the building’s modernist past and has ultimately removed all brutalist-style evidence in its adaptive reuse design. Philosopher Kurt Forster wrote, “A false congruence
of past and present inevitably corrupts the identity of both, leaving its objects “stranded” in history.”9 The Wells Building has become romanticized and representational of a past generation, but the complete disregard of its modernist phase from which it has descended from, stylistically leaves the building frozen in time.

The recognition of disregarded histories in adaptive reuse design leads us to the conceptual model of the architectural wormhole. An architectural wormhole connects two nonsequential periods of a building’s history, resulting in a fragmented narrative. This wormhole represents a figurative loop in a building’s timeline where a specific narrative is deliberately denied acknowledgement in a later phase of the building’s life. This discontinuous and fragmented building history is often a result in the adaptive reuse of abandoned structures. Over the building’s life, it has transitioned from occupation to abandonment to reoccupation. Many times, memories of the abandoned phase become lost as a new design and program are applied to the building. The abandoned history is significant not only to the building’s overall narrative, but also to the greater society and the societal conditions that evoked its dereliction in the first place. How can a building’s ruinous past (typically lost within the architectural wormhole loop) be addressed in an adaptive reuse design that will enrich the understanding of the building and its transformations over time but still meets the current needs for an effective reuse?

To explore this question, this document is divided into three parts: The Investigation, The Methodology, and The Application. Part one, The Investigation begins by defining the phases or stages a building transitions through during its life cycle from conception to demolition. By analyzing characteristics of these phases and the forces

that generate their transformation, corollaries are made to understand how society’s values and investments in a building change over time. These explanations may suggest why some phases of a building’s life cycle are recognized and celebrated in adaptive reuse designs while other phases are ignored and lost within the architectural wormhole. Normative adaptive reuse projects tend to take three different approaches to addressing an existing building’s narrative and the extent to which it influences the reuse design. These three approaches are analyzed and critiqued. Several preservation and restoration theories and their relevance to adaptive reuse are also outlined to give additional perspectives on the subject. Finally, to develop a better understanding of the roles and significances of ruins throughout history, a brief overview of ruins is included followed-up with a categorization of six common themes found in ruinous and abandoned architecture.

Part two, *The Methodology*, suggests a strategy in which a building’s abandoned narrative can be represented in its adaptive reuse design. This strategy uses a forensic analysis to callout the ruinous characteristics. These characteristics can then be translated through mimicry based on material, patterns, or function in its next phase of development. A method is outlined that creates a modified framework in which the adaptive reuse design process may follow. Several precedent projects have taken a similar process into consideration and have been successful in translating a building’s ruinous narrative in its adaptive reuse design.

Part three, *The Application*, introduces the design project and how the methodology for interpreting and translating ruinous phase characteristics can be employed in an adaptive reuse design for an abandoned warehouse in Toledo, Ohio.
Architectural Wormhole

Problem:
An architectural wormhole represents a loop in a building's timeline when a specific phase or narrative is deliberately denied acknowledgement or memory in the adaptive reuse design, therefore creating a discontinuous and fragmented history of the building.

de_Fragmentation:
Translating the Ruinous Narrative in Adaptive Reuse Design

Case Study:
The Wells Building in Sapulpa, Oklahoma was stripped of its modernist facade during its adaptive reuse development in the 1990’s in order to create a more “desirable” appearance that is reminiscent of its original 1920’s aesthetic.

Question:
How can the ruinous history of a building be translated in a reuse design that is representative of the abandoned phase and is honest to the building’s holistic narrative?

2.3: Diagram representing the loss of the Wells Building’s historical narrative within the architectural wormhole loop
Part One // The Investigation

Building Life Cycles & Phases
Historical Preservation Overview
Preservation Theories
Adaptive Reuse Practices
History of Ruins
Six Themes of Ruins
  Sublime
  Fragmentation
  Elapsing of Time
  Resurgence of Nature
  Material Engagement
  Repurposing

Neglected Narratives of Ruins
In *Building Lives*, architecture theorist Neil Harris identifies three phases in a building’s timeline: conception and birth, growth and maturity, aging and death. Harris applies the term “rites of passage” to describe the transitional benchmarks in a building’s life. Cultural customs, rituals, and symbolisms are often used to denote the ending of one phase and the beginning of a new one. Throughout history, church and temple dedications have been represented through artwork to commemorate the origin of that institution. The Hagia Sophia in Istanbul displays a mosaic depicting Byzantine Emperor Justinian offering a small-scale model of the church to Christ and the Virgin Mary. Cornerstone, keystone, ground-breaking, and ribbon-cutting ceremonies are common public spectacles to raise support and awareness for the building and to signify its coming into existence. These initiation events also indicate responsibility, investment, and possession of the buildings by their owners.

The growth and maturation phase is characterized by occupation, maintenance, and modifications. Harris describes the increasing importance of janitorial services beginning in the late nineteenth century as technological advances in construction and materials led to the development of skyscrapers and large-scale commercial and public buildings. Heating and ventilating systems became increasingly complex in these facilities requiring more thorough and routine management. During this time, plumbers, electricians, repair specialists, elevator operators were all seen as vital caretakers for the safety and efficiency of the building as well as its occupants. The demand for men to fill these positions reflects the implementation of the “latest” technology and the alterations they require in the built environment.
environment.14

The final phase in a building’s life cycle is aging and death. “When in addition to looking dated and unfashionable, many modern structures could also be stigmatized as technically primitive, economically inefficient, or inherently undersized, their future became uncertain and survival doubtful.”15 When a building no longer meets the needs of its clients or program, there are three possible options for it. The first option is that the building retains its program and undergoes a series of renovations and updates. The second option is that building changes its function and serves the needs of a different program. This option may require adaptations and modifications. The third option is that the building is vacated by its users and left abandoned.

Abandoned buildings often times lack interest and ownership. When the owner and occupants abandon a building, they leave it to withstand environmental forces and the test of time on its own, without any human intervention. Maintenance is expensive with little return on the investments if there are no future plans for redevelopment. Once the building is abandoned, there are three possible fates for it: reoccupation, demolition, or degradation. With reoccupation, the building is revitalized for either the previous program or redeveloped for a different program through adaptive reuse. The second fate is that the building is completely removed through demolition. The third fate is that the building is left to perish, deteriorate, and become a ruin. Gionata Rizzi’s definition of a ruin is, “a building which, having lost substantial parts of its architectural form, has ceased to function as such.”16 Although “substantial” is a relative, non-quantifiable term, for the purposes of this thesis, all buildings that have been abandoned of programmed occupancy and maintenance responsibilities will be classified as ruins.

14 Neil Harris, Building Lives, 110.
15 Ibid., 115.
For centuries, building histories and narratives have been of special interest to architects and scholars particularly in the historical preservation field. Architect and preservationist James Marston Fitch, divides historic preservation into seven different methods based on the level of intervention to the subject. The methods, listed from the least drastic measures to the most drastic measures, are: preservation, restoration, conservation and consolidation, reconstitution, adaptive reuse, reconstruction, and replication.\textsuperscript{17} It is important to distinguish between these approaches as they have different goals and standards in the way historical buildings structures are managed.

\textit{Preservation:} In the least invasive of the seven approaches, the party or agency in charge of caring for the historical structure maintains it in the same physical condition as it was received without conducting any additions or subtractions. Some interventions may be necessary to protect the integrity of the building but they should be kept to a minimum.

\textit{Restoration:} The building or subject is reverted back to a previous phase in its historical narrative. This phase could be its condition as it was originally constructed or the phase that is upheld as the most superior. The restored state attempts to bring people back to a time period where the building can be experienced and appreciated as it was in its earlier existence.

\textit{Conservation and Consolidation:} This approach uses physical interventions to maintain the historical subject’s structural and material stability and to prevent the building from degrading into a greater state of ruination.

\textsuperscript{17} James Marston Fitch, \textit{Historic Preservation}, 46.
**Reconstitution:** Buildings that have been severely damaged and fragmented either by natural causes or wars are the main candidates for the reconstitution. This method uses reassembly to piece together the building’s parts either at its original site or at a new location.

**Adaptive Reuse:** Modifying an old building for a new program, is usually the most economical method in which an aging structure can be saved. The new program often has little relationship with the original use of the building so a variety of strategies may be employed to renovate and reconfigure the interior spaces to meet the needs of the new tenants. Additions and subtractions are common operations in reuse designs.

**Reconstruction:** The recreation of a building that no longer exists characterizes this method of intervention. The building is constructed on its primordial site and its form is determined by archeological evidence and literary sources of the original.

**Replication:** The last approach constitutes the coexistence of a building that is still standing with an exact copy of that building at some other site.¹⁸

Each of these seven approaches has a broad range of both supporters and critics. The decision to choose one method over another is never without controversy. One approach is not necessarily better than another, but their individual doctrines could generate very different results and varying levels of authenticity. The goals and objectives of the historical building should be clearly defined to ensure the most appropriate intervention strategy is exercised in each situation.

Eugène-Emmanuel Viollet-le-Duc, John Ruskin, and Alois Riegl are three well-known scholars in the field of historic preservation. They each have their own perspectives on intervention methods and when they should or should not be practiced on a building.

Viollet-le-Duc, a nineteenth century French architect, viewed the Gothic period as the height of architecture and that all architecture should aspire to this style. He believed the role of restoration is, “not to preserve it, to repair, or to rebuild it; it is to reinstate it in a condition of completeness which may never have existed at a given time.”\textsuperscript{19} The restoration process he endorsed consisted of first carefully documenting and recording the buildings before any restoration interventions were initiated then reconstructing additions that added splendor to the building. Viollet-le-Duc’s work on the ruined fortification Carcassone included an in-depth archeological analysis followed by a restoration of the defense walls that had been previously destroyed. Many preservation projects during this era emphasized “stylistic unity” as the primary restoration goal.

As a response to the popular stylistic unity approach to restoration, the art critic John Ruskin was vehemently opposed to restoration. He claimed that architectural restoration meant “the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed.”\textsuperscript{20} In 1849, he published \textit{The Seven Lamps of Architecture} proclaiming his seven principles on architecture the sixth of which was the lamp of memory. “That which I have above insisted upon as the life of the whole, that spirit which is given only by the hand and eye of the workman, can never be recalled. Another spirit may be given by another time, and it is then a new building.”\textsuperscript{21}

\textsuperscript{20} John Ruskin, \textit{The Seven Lamps of Architecture}, 192.
\textsuperscript{21} Ibid., vi: xviii
Referring to ruins, Ruskin wrote, “There was yet in the old *some* life, some mysterious suggestion of what it had been, and of what it has lost; some sweetness in the gentle lines which rain and sun had wrought. There can be none in the brute hardness of the new carving.” Ruskin would be in full support of preservation doctrines that state previous improvements and modifications to old buildings, even if they are widely viewed as violating the original design intention, should still be respected because they too, are part of the building’s history.22

Alois Riegl coined the concept of *Kunstwollen* that means “each period or each culture has its particular conditions, within which artistic production achieves its character. In this context, there is mutual influence between an artist and his society.”23 Riegl theorized that we must know and understand what came before us (the old) in order to truly appreciate the new. “Each successive step implies its predecessor and could not have happened as it did without that earlier step…every human activity and every human event of which we have knowledge or testimony may claim historical value; in principle, every historical event is irreplaceable.”24 Riegl, similar to Ruskin argued against complete restoration of a building because part of its narrative becomes lost. He said, “Restore the object thoroughly and you cancelled both its documentary value—making it an unreliable witness to the time of its origin—and its capacity to convey a sense of historical distance, of the time elapsed since its creation.”25

Adaptive reuse is a common way for old buildings designed for previous purposes can survive by being repurposed for some other uses. Writer Stewart Brand claims that adaptive reuse completely invalidates the “form follows function” axiom. He writes: “The building becomes more interesting when it left its original function behind. The continuing changes in function turn into a colorful story, which becomes valued in its own right. The building succeeds by seeming to fail.”26

Adaptive reuse as the process of reclaiming old buildings to develop a renovated building for a new function or user group can have economic, historic, and aesthetic values.27 For an abandoned building, a rehabilitation project can greatly increase the property value and can also be a major catalyst for changes within the surrounding community.

Architects often draw ideas for redevelopment by pulling information and features from an older building’s functional and physical history to help inform their design strategies. Constraints in old buildings for an adaptive reuse project can create challenges that new construction projects are not necessarily forced to overcome. These challenges often have some relatively set constraints that encourage creativity and innovation.

John Ashurt identifies four steps for conservation of a structure that could also be used to assess a building’s potential for adaptive reuse. The first step is to conduct a survey to inspect and document the building’s history and its context within the physical and cultural environment. The second step is to define the social, cultural, and economic significance of the building’s heritage and identity. This step requires some interpretation in order to establish a hierarchy of features or qualities worth saving or focusing on in the redevelopment phase. The third step is to analyze the building from a scientific and forensic

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26 Stewart Brand, How Buildings Learn, 104.
27 Elisabeth Kendall Thompson, Recycling Buildings, vi.
method to determine physical condition and stability of the structure. Structural and material feasibility studies can have a large impact on the future design and the construction measures that may need to be taken. A building’s visual, structural, and social-functional integrity should be analyzed and assessed before plans are put in place for its reuse. An in-depth survey and analysis should be done of a building to assess its physical conditions and to estimate its depth of repair and economic value. Generally, it is more cost efficient to renovate an existing building than for new construction, but some old buildings are beyond feasible repair. The rule of thumb for abandoned building renovation is: if the repairs will cost half the repairs of the building, it is not an economically feasible project. A full documentation is performed and any risks and vulnerabilities are noted. The fourth step is strategy and implementation. This phase considers all the information gathered and interpreted from the other phases to create a plan and design in which the building can be renovated in a way that maintains important parts of its physical and cultural heritage while bringing new programs and systems into it.

The adaptive reuse practices common today typically take three different approaches in responding to the building’s past narratives. In the first approach, the building is restored to its original architectural design. The building is reprogrammed but attempts are made to return it to its original occupied condition and any interstitial time or function is erased. The Wells Building introduced in the preface falls under this category of adaptive reuse. Another example is the general store in Okmulgee, Oklahoma first constructed out of brick in 1868. In 1882, the building was remodeled with sandstone and incorporated with adjacent

buildings in the city block. In 1954, the building was completely modernized and remodeled with new windows, stucco, marble panels, and roman brick. During the “Main Street Program” surge in the 1980’s, the marble panels and stucco were removed from the building’s façade to restore it to its early 20th Century aesthetic. This approach would be more inline with Viollet Le-Duc’s perspective on preservation where the grandest phase of a building’s life is the one worth celebrating and reverting back to even if it denies a more recent past.

In adaptive reuse projects, the function of the building changes depending on the needs of a new program and it may not be appropriate to completely revert the building back to its past life as the building and its function have evolved over time. Restoration for an abandoned building may be an appropriate strategy for a renovation design if the function of the building is equivalent to its original function and the objective is for the subject to experience the building as it was in its primary condition. It should not be a denial of a more recent history. “Ideally, converting old structures to new uses involves delving into the past, not to rewrite history, but rather to breathe new life into it.”

The second adaptive reuse approach used today is the tabular rasa method where the building is seen as a blank slate and a designer and client force their own agenda and the building is wiped free of all previous uses and histories. The outside of the building may be totally unrecognizable as a new design ideology is imposed on the structure that does not have any relationship with the older building. A new spatial and qualitative organization is created for the interior of the building.

The third approach to adaptive reuse attempts to incorporate a range of the building’s history into the new design. The phases, including the ruinous ones, are represented through some form of interpretation into the new design. John Ashurst summarizes this methodology:

Successful modern approaches to interpretation encompass all phases of a monument’s history and include details of its most recent, post-ruinous past, the objective being to provide visitors with the fullest understanding of a monument’s story. This is a departure from the more traditional, quite selective approach in the UK, which focused on a particular time in the life of the pre-ruined building (typically its earliest, defining or grandest phase).

Another example of this is an addition that makes no attempt to mediate the new with the old other than framing. This partitioning of the building often delineates the division between the old and the new which may create an interesting contrast, but it uses the reuse only as an opportunity to showcase what was there before.

Although these three approaches still retain varying degrees of memory and identity of the building, they often fail to acknowledge the ruinous and dilapidated stage of abandonment in the building’s life cycle. The third method may be the closest to recognizing the abandoned state, but it often responds through the technique of framing. The historical or abandoned characteristics act as elements in which to design around. Many times they are incorporated in the new design and serve as constructive restraints that the architect thoughtfully responds to, however, they persist as their own entities within the new design but they largely remain static and unchanged in the new design. Although

33 Arian Mostaedi, Building Conversion & Renovation, 8.
34 John Ashurst, Conservation of Ruins, 255.
they may serve as inspirations for the new design, the elements themselves do not function as an evolutionary driver or platform for departure. They essentially only accentuate a moment or snapshot of time.

This thesis is an investigation on how the design of an adaptive reuse project can be enriched through interpreting and translating the conditions and underlying meanings embodied by abandoned elements. In a way, by studying the building we empower the building by giving it a voice and allowing it to speak for itself. Just because we have the ability to move or remove walls, does this mean we should? By studying a building’s physical characteristics during its abandoned phase, we may learn more about the natural environment in which it is located. The building may represent the physical embodiment of environmental factors. For instance, how a building’s foundation has moved or shifted may give insight into the seismic activity in the area and how a new design may take this movement into consideration. Another example may include natural vegetation and where it grows on the site. We may be able to conduct a literal post-occupancy evaluation when the building is no longer occupied in its prescribed program. Many normative adaptive reuse projects do not view the abandoned phase of a structure as a viable source for inspiration, but it is rich with information about the building’s transformation. In fact, people have been fascinated with the abandoned phase throughout all of history and people are interested in how buildings have evolved over time.
“Do you realize that ruins have a poetry of their own? You don’t know why ruins give such pleasure? I will tell you. Everything dissolves, everything perishes, everything passes, only time goes on. What is my existence compared to crumbling stone?” – Denis Diderot

French philosopher Denis Diderot is addressing the fascination with architectural ruins that has persisted throughout many generations of man. His theory is that the infatuation stems from the respect and pleasure of the built form as well as acceptance of the perpetual passage of time. Ruins have been studied, preserved, replicated, and have inspired many architectural designs, ideologies, and movements. Three popular ideologies that celebrate ruins are mannerism, the picturesque, and the theory of ruin value.

Early 16th Century interior designs displayed ruinous buildings, typically in frescoes. The frescoe *Fall of the Giants* by Giulio Romano at Palazzo del Te depicts a collapsing of the architecture upon which it has been painted. The dichotomy between the built structure and the crumbling composition of the applied paintings creates an interesting tension in the room that actively involved the viewer.

Ruins were popular detail elements fulfilling the notion of the picturesque in early 18th Century garden designs. They played into the role of the picturesque’s adoration for broken surfaces and decay contrasted against the planned and regimented garden design. These ruinous follies were often built with rusticated details as sculptural or monumental constructs to accent the landscape. In 1778, Johann Ferdinand Hetendorf designed an artificial Roman ruin for Schoenbrunn gardens in Vienna. The design was modeled after the Ancient Roman

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temple of Vespasian and Titus. The structure came to be known as the “Ruin of Carthage.” It features fragmented entablatures, broken statues, and overgrown vegetation.

In the 1930-40’s, Adolf Hitler was gaining power and influence in Germany. He hired Albert Speer to be his chief architect. The joint collaboration between the two developed building designs enormous in scale to symbolize the power and permanence of the Third Reich. The buildings designed Speer coined the term *Die Ruinenwerttheorie* or the “Theory of Ruin Value” and envisioned his architectural designs as ruins before they were even constructed. Hitler was intrigued with the notion that his legacy would extend for so many centuries that the monumental structures would begin to crumble, because like any ruin, they too cannot withstand the effects of time and the force of gravity.

38 http://www.schoenbrunn.at/en/home.html

7.2: Johann Ferdinand Hetendorf, Ruin of Carthage, 1778

7.3: Roman Temple of Vespasian and Titus ruins

7.4: Albert Speer, Grosse Halle, Berlin, 1937-40
Six themes have been identified in architectural ruins that make them different from occupied buildings. These themes are the sublime, fragmentation, elapsing of time, resurging of nature, material engagement, and repurposing. These themes attempt to encapsulate the intrigue surrounding abandoned buildings. Because they are unoccupied, they are viewed as mysterious and ominous. Once buildings become reprogrammed and occupied, they immediately lose many of the characteristics and the “charm” associated with ruinous structures. Some of these themes cannot be recreated in the reuse of abandoned buildings, but there are some properties that have potential to persist. By identifying these characteristics, some of these qualities could possibly be translated in the new design in a way that is representative of the abandoned phase, create a more holistic reading of the building, and preserve some of their qualities and perceptions.

Ruins are affected by both active (human) and passive (environmental) factors. The active causes include: neglect, purging, fire, mistreatment, vandalism, war, and design inadequacies. The passive causes include: rain and water, seismic forces, thermal stresses, vegetation, rodents, insects, and wind.39 Each structure may be subjected to a varying degree and combination of those forces.

The Sublime

“Sublime upon sublime scarcely presents a contrast, and we need a little rest from everything, even the beautiful.” – Victor Hugo

Although the term sublime can have a range of meanings, Victor Hugo’s definition for the sublime resonates within the architecture discipline. His description of the sublime characterizes something as

8.1: Victor Hugo, La Tourgue, 1835
8.2: Caspar David Friedrich, Wanderer above the Sea of Fog, 1817

39 John Ashurst, Conservation of Ruins, 11.
exhibiting both beautiful and repulsive or terrifying qualities at the same time. The Romantic Period of the 19th Century embraced the sublime ideology and produced art, writings, and architecture that attempted to capture and reinterpret the emotions generated by the sublime. This quote encapsulates the power of the sublime: “Niagara Falls, a place of risk, is beautiful in the postcard; sublime at a middle distance, but terrifying close up, for your body aches to join it, to be one again with fierce water, to experience primordial chaos, undifferentiated, formless, unstoppable power.”

Caspar David Friedrich’s *Wanderer above the Sea of Fog* painting in 1817 evokes fear from the unyielding ocean crashing against the rocks along with awe and adoration for nature’s beauty.

Abandoned buildings are also associated with feelings of fear, fascination, and admiration. The realization that man envisioned these structures for man and over time, man has completely removed himself from the equation, leaving the building to stand on its own against the forces of time and nature. A modern take on the sublime is a photo shoot entitled, *The Missionary* directed by photographer Baldovino Barani in which beautiful fashion models were contrasted against a background of abandoned and degrading buildings. It is this dichotomy of ugly versus beautiful that resonates with the audience.

The sublime plays a large role in one’s experience of Daniel Libeskind’s Jewish Museum Berlin. Libeskind integrated four inspirational components as the framework for the building’s formal design. The first component was a complicated matrix of lines in plan extending from the site to represent the connections between the Germans and the Jews. His belief was that the Jewish citizens of Berlin were an important part of the city’s history and culture. The matrix also resembles a compressed and distorted Star of David. The second


8.3: Baldovino Barani, *The Missionary*
8.4: Diagram of the Jewish Museum Berlin
influential component was the unfinished opera *Moses and Aaron* by the Jewish composer, Arnold Schoenberg. Libeskind wanted to “complete the opera architecturally” within the design of the museum. The third component was the inclusion of the *Gedenkbuch* volumes that listed the names of all the people deported from Berlin during the Holocaust. The fourth component was German author Walter Benjamin’s work, *One Way Street*.

As visitors move through the Jewish Museum Berlin, the feeling of sublime begins to surface. The jagged trajectory through the museum forces you to constantly stop and shift directions and creates moments for pause, reflection, and framed views. The multi-story voids in the floor planes forces you to take notice of them and walk around the voids as opposed to a museum with flowing spaces where visitors seamlessly drift from room to room. The non-uniform and irregular windows create instances of light. The haunting memories of the Holocaust along with the sharp turns and edges of the building create feelings of discomfort yet the beautiful detailing and play of light combine to evoke the sublime.
Fragmentation

Ruins inherently encourage the mind to piece together the fragments and fill in the gaps of what may have existed before. Based on contextual clues and our own cognitions, we can make reasonable assumptions as to how a physically deteriorating building may have looked before the stages of degradation took place. We envision how broken elements can be reconnected to form a whole. In our heads, we unconsciously flip the positions of overturned and disordered objects back into their normatively accepted as “correct” positions. “Storytelling constitutes a direct exploration of, and confrontation with, part of the built environment that is (temporarily) inaccessible, or finds itself in a liminal status and in so being calls up all sorts of associations.”42 In abandoned buildings, analyzing furniture, accessories, and room adjacencies can aid in determining functions of spaces. We draw upon our memories or knowledge of the building and its history to inform our ideas and visions of the site.

The theme of fragmentation can be seen in Peter Eisenman’s design for the Wexner Center at The Ohio State University. The building references the old armory previously constructed on the site in 1897 and was later destroyed in a fire in the 1950’s. The Wexner Center design has large castle-like structures that mimic the armory, but they are fragmented and the building appears discontinuous and incomplete. The white gridded steel scaffolding further emphasizes the “under construction” aesthetic.

The Wexner Center is a manifestation of Eisenman’s deconstructivist agenda: broken and fragmented units representing a break from reality. By overlapping the city grid with the campus grid, he could employ his own system against the regularity of the datum. “The

42 Melanie van der Hoorn, Indispensable Eyesores, 5.
‘monument’ here gradually dissolves into a series of discreet fragments – of replicated history, of grids and structures – that comfortably touch, intersect or break into each other with no overall unity save that of metonymic resonance.”43 These strategic breaks are in-filled with a new form, material, protrusion, or recess creating a surprising composition.

Another interpretation of the Wexner Center is the figurative collision of the three life phases of the building: the original armory, the armory damaged by fire, and the new visual arts center. “The ruinating work of time is replicated in simulacrum as a complex play between the restored and destored.”44 The repetition of the white scaffolding grid represents never-ending completion and a sense of timelessness.

43 Rafael Moneo, Wexner Center for the Visual Arts, 35.
44 Ibid., 34.
Elapse of Time

The theme of time was touched upon in the analysis of the Wexner Center. In the essay, “The Modern Cult of Monuments,” Alois Riegl wrote, “We humans have always dreamed of an escape from our body’s vulnerability, from our own mortality, from death, from…the ‘terror of time.’” Buildings are also subjected to this ‘terror of time’ and time has no discretion on which building types nor architectural styles in which it affects. Although to varying degrees, all built structures share the reality that they are vulnerable to the external, physical environment and the forces of gravity and time.

According to Riegl, in order for a ruin to have significance in its age-value, it must “reveal the passage of a considerable period of time.” Unlike a well-maintained building, static and boasting of permanence, a ruinous building has unmistakably succumbed to time and age. Crumbling buildings challenge our perception of stability and man’s domination over his environment in a perpetually evolving world. In fact, the progression of time is made even more apparent and, to some extent, accelerated when maintenance efforts are terminated. In observing a ruin, one cannot help but to acknowledge the passage of time and the building’s inevitable demise either through natural degradation or planned demolition unless some form of intervention takes place again.

Architectural ruins often serve as the backdrops in post-apocalyptic films and other entertainment media. The presence of these ruins immediately implies the movie takes place in a future time. They represent a pivotal turning point in mankind where total destruction has marked the ending of the world, as we are familiar with it, and a new beginning filled with unknowns, instability, and the need for both physical and societal rebuilding and reconfiguration.

8.11: Movie poster set in a post-apocalyptic age
Resurgence of Nature

“Nature takes its revenge and, through the assaults of vegetation, reconquers what man has built.” – Ercole Silva, 18th Century writer

The fourth theme highlighted by ruins is the built environment’s return to nature. Over time, vegetated growth will emerge through an abandoned building’s holes and cracks, pulling apart construction materials and finishes. Insects will infest and degrade materials. Alois Riegl wrote, “Nature’s reign, even in its destructive aspects—which also brings about the incessant renewal of life—claims equal right with man’s creative power.” Mold and microbes find plenty of sources for food and environments in which to proliferate. Rodents, birds, and other animals see abandoned buildings as a new type of biosphere and reinterpret found materials and spaces to create shelters of their own within the structure.

The types of vegetation that are able to adapt to abandoned ruins and landscapes are large determiners of the species of animals and predators that will be attracted to that habitat. In a way, the uncontrolled habitation by plants and animals are a relatively accurate indicator of the indigenous flora and fauna of a region. After studying urban British industrial ruins, author Tim Edensor wrote, “The fecund world of creatures and plants as active agents in the making of environments remains firmly outside the city limits, and those feral spaces in the city that most sustain them are cast as ‘wastelands’ ripe for development.” Urban pests (both plant and animal) that are expelled from human occupied properties often seek refuge in abandoned buildings and represent the natural organisms of the area as opposed to buildings.

47 Gionata Rizzi, Conservation of Ruins, xxii.
49 Tim Edensor, Industrial Ruins, 47.
and landscapes scattered with foreign vegetation and maintained with pruning shears, artificial fertilizers, and pesticides.

The History Channel special, *Life After People* is centered on speculations of how the world and all its systems would react if all of mankind were to suddenly and unexplainably vanish. The program interviewed scientists from a wide range of disciplines including geology, biology, and zoology, as well as experts from the architectural and engineering fields for predictions of what would happen to our built environment if left at the mercy of the natural world. A hypothetical timeline has been formulated that illustrates how our manmade constructs will degrade, collapse, and be repossessed by nature without human’s intervention, protection, and maintenance. The special gained so much interest and popularity that it became its own series. The episodes chronologically simulate recognizable structural landmarks such as the Statue of Liberty and popular cities like Chicago and depict their changes in organization, structure, and function after humans are no longer the user group. Although *Life After People* is highly theoretical and dramatized, it does probe at the question of how humans effect and maintain their built environments.

8.13: *Life After People*, Prudential Tower, Boston, 150 years after people
Material Engagement

Architectural ruins create a unique opportunity for people to either visually or physically engage in the materiality of a building. Although societal provisions often condemn physical interaction with an abandoned site, these buildings are inadvertently an alluring haven for trespassers and vandals to explore material properties in an uninhibited fashion.

The second law of thermodynamics states that entropy is the universal tendency for increased disorder and randomness in the universe. Abandoned buildings also have an increase in their disorder of objects and spaces over time. We are witnesses to the force of gravity and the retaliation against completeness. The value of materials and objects themselves are subverted and they become more interesting through their breakdown into smaller, individual components. The building is no longer experienced as a whole, but in terms of the collective pieces that makeup the whole.

Vandals can simulate a faster elapse of time over which materials break down or degrade than if left only to natural processes. The abandoned ruins provide vandals with a rare chance to display dominance over the materiality and steadfastness of a structure that is larger than themselves. The lack of ownership in unsupervised environments may encourage individuals to express power and interact with materials that are typically unacceptable. Graffiti or “tagging” by groups strengthens this sense of ownership as one group demarcates their territory for which they perceive to have control over. This is an ironic contrast to abandoned buildings in which people label as eyesores and the property owners have forfeited responsibilities and obligations for site maintenance.

The concept of uncovering is also encapsulated within the
material engagement theme. As materials breakdown and layers peel back, older surfaces are revealed. Weathering and deterioration may lead to discoveries in construction joinery. Before the architectural Modernist Movement, the details of building assembly were typically not exposed, and abandoned buildings are interesting for their slow unveiling of materials and concealed systems.  

Gordon Matta-Clark, well known for his abstract engagements and experimentations with materials often used vacant buildings as his artistic medium. He broke down materials as a method to showcase their physical properties and he created atypical arrangements and juxtapositions with them that encouraged new ways of thinking about material components and relationships. Matta-Clark also investigated thresholds and challenged the conventional understanding and orientation of spaces. The atmospheric photomontages he created from his projects attempted to convey ideas of contorting the dimensionality and perceptions of the spaces. In Conical Intersect, three photographs of a round hole cut out of a wall are taken from different angles and are radially arranged. “The view to the outside and into different corners of the house suggests the situation of a visitor moving around in the interior, catching sight of fragments of the architectural structure and the shape of the artistic intervention.”

These montages served as ways people could experience his work without physically being at the sites.

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51 Corinne Diserens, Gordon Matta-Clark, 140.
Repurposing

Ruins may be devoid of programmed occupation, but they often still invite alternative forms of habituation. Because of their desolate nature, they can conveniently shelter squatters, socially unacceptable behavior, or crime. These unwanted activities often lead to the personification of abandoned buildings as dangerous, beyond their physical and structural deficiencies. The architecture is now defined by the deprogrammed use of space.

Objects, surfaces, and structures may change orientation, aesthetic, and function over time to satisfy the new needs of a space in its abandoned state. Over time, objects uses are decoded when they no longer serve their intended purpose, but they could also be recoded if they function as something else. In the ecological world, scavengers and rodents may use materials found in an abandoned building as food or shelter sources. The normative or accepted use of objects is challenged as their primary function changes in the abandoned phase.

Many architects and designers are interested in this idea of repurposing. Adaptive reuse is in itself, a form of repurposing. The architects at the Rural Studio, for example, are well-known for their innovative work and experimentation with common materials and waste by transforming them into construction materials. Another example of repurposing can be seen at Landschaftspark Duisburg-Nord, where the old industrial walls are now being used as outdoor climbing walls.
The six themes and examples outlined in the previous section attempt to identify our attraction to ruinous buildings. From an anthropological perspective, manmade ruins are a primary source of investigation into the human specie’s past before historical accounts and records were transcribed and later translated. Even before written history, ruins serve as historical sources that archeologists have tried to piece together the past to formulate a more complete understanding of the events and cultures that shaped our world. Buildings are constructs of human needs and intentions at the time of their development. Understanding the pasts and the histories that we have descended from have shaped the people we are today and the society in which we have created around us. Denise Lawrence-Zuniga writes, “Architectural forms have power – they invite human interest and evoke response; they guide behaviour, shape values, and act as repositories for meanings that shift and change.” The occupied state of a building and the reasons for its demise reflect the changing of times and values in society. It is the ability to learn from the past that we as a society can transform ourselves and develop a more conscious awareness of the world, relationships, and systems around us. But, as discussed in the normative adaptive reuse section, buildings are often stripped of the qualities and evidence of its abandoned phase in the new design of the building. Why then, are ruinous narratives not valued and ultimately are removed from their historical context?

To question this further, why do some adaptive reuse strategies

53 John Ashurst, Conservation of Ruins, 255.
54 Melanie van der Hoorn, Indispensable Eyesores, 13.
deny a part of the building’s history? What factors characterize a
building as “bad” or “corrupt”? The building itself does not exhibit
qualities of being bad: it is social projections onto the building that
make it corrupt or less than acceptable. The personification of bad often
results from physical conditions that make a building non-functional or
from an unwanted history.

Brian Ladd identifies two different definitions for “corrupt”
buildings. The first meaning refers to degrading or contaminated
buildings. Asbestos and harmful organic matter are common causes that
can lead to this definition of a corrupt building. The second meaning
of corruption refers to buildings that are “perceived as concrete
embodiments of a wrong ideology or dark period in history.”

Ladd’s first definition, analyzes the building from strictly
a physical point of view. It is within this idea that the quality of a
building’s construction and design, as well as its ability to meet its
programmatic needs are met. This is the more objective of the two
definitions in that construction and safety standards must be met in
order for the building to function. Safety codes are enforced to protect
the users and the building. A building that puts people at safety or health
risk is not a functional building. Sick-building syndrome can lead to an
unhealthy interior environment for its occupants because of ventilation
systems failures and the unintended hazardous side effects of synthetic
materials.

Ladd’s second definition analyzes a vacant building from a
psychological perspective. This second idea involves memories and
perceptions of the building. This perspective is the projection of
ideas and thoughts onto a building. The building inherently becomes
symbolic of a specific time and place. Because buildings are large

9.2: Black mold can grow on water-damaged materials leading to poor
indoor air-quality problems

manmade constructs, they also represent the ideals in which they were created, the functions they sheltered, and the events that occurred there. This may also include stylistic and aesthetic tastes. These psychological perspectives can effect how a surrounding community perceives a building and the way they choose to interact with it. For instance, a vacant house in a neighborhood is personified as dangerous and unattractive to the neighborhood because it may attract unwanted activity, therefore, surrounding property values may decrease.

People may think it is in poor taste to keep a building standing in the wake of the destruction it represents. Why do we need or want a large ominous building looming over a city, a constant reminder of a past we want to forget? The physical presence of a building adds a new layer of memory to the past. This layer is one that can be occupied and has depth and spatial qualities. John Ruskin said, “Time alters understanding and blurs memory; architecture remains.”

A historical example of psychologically bad buildings are the German buildings constructed during Adolf Hitler’s reign because they are often seen as physical manifestations of Hitler’s empirical vision. Some of these buildings still stand today, but not as the strong, solid, powerhouse structures they once represented. Although the buildings may physically and aesthetically be the same buildings, they now represent a solemn past of death and destruction that pulled countries, communities, and families apart. When discussing the work of Albert Speer, Leon Krier says, “Oblivion is considered the appropriate form of criticism, and dynamite the adequate instrument for dealing with Speer’s buildings and projects.” Many of Hitler and Speer’s buildings were destroyed in a post-war attempt to reconcile and rectify the three-dimensional presence of the fascist regime. It is estimated that the

rubble of over 400,000 Berlin buildings make up the man-made mound
known as Teufelsberg, German for “Devil’s mound.”

In American History, the World Trade Center memorial raised
questions of just when is it deemed appropriate by the majority to
memorialize a ruin? Some conflicting views that were expressed about
the proposal to incorporate a piece of the World Trade Center into the
memorial to the victims of the terrorist attacks in both 1994 and 2001.
One of the most memorable and recognizable symbols of the event was
the 15 storey remain of the South Tower. The criticism of incorporating
that ruin among the memorial was that, “It [the ruin] elevates
architecture above human lives, and makes a showpiece of something
that was turned into an instrument of death. It collectivizes deaths in
a time and place where the individual is paramount. And it flirts with
aestheticizing mass murder.”

A psychologically bad building may arise from aesthetic values.
Its appreciation tends to fluctuate based on social values during the
building’s existence. With anything aesthetic, fads and tastes change
over time. Stewart Brand claims the second thirty years of a building’s
existence is when a building is “out of fashion, out of repair, and most
vulnerable to demolition.” Buildings may not be appreciated for
their appearance as they did when they were originally designed. The
brutalism movement of architecture in the 1950’s is one such example.
Brutalist architecture, popular from the 1950’s through the 1970’s is
often characterized by concrete, monolithic surfaces, and small glazing.
Boast permanence and steadfastness especially after the Cuban Missile
Crisis. Today, many people would agree that the buildings seem drab,
heavy, and ugly. These buildings’ materials make their demolition

60 Eric Fredericksen, “Ruins and Memory,” 50.
61 Stewart Brand, How Buildings Learn, 100.
expensive and additions difficult.

In summary, the ruinous stage of a building is part of its lifecycle and its history. By studying what characteristics and features that attract and intrigue us to the ruinous states of abandoned and dilapidated buildings, we can discover if there is a way to integrate these qualities into an adaptive reuse project through interpretation and translation. Why deny the vacant state of a building when it has a lot of intrigue to offer? Melanie van der Hoorn writes, "People continue to perceive specific buildings as the concrete and repugnant embodiments of a deplorable period in history, and on the other hand, these objects are part of a local, sociocultural identity. Their elimination would literally and figuratively leave a large gap." Although Van der Hoorn is referring to the disposal of entire buildings, a similar notion could be applied to parts of a building, perhaps to a less dramatic extent. If a building’s additive layers and features are stripped away, important parts of the building’s history are also lost.

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Part Two // The Methodology

De_fragmenting Building Narratives
Design Methodology
  Historical Analysis
  Forensic Analysis
  Interpretation
  Translation
  Application

Precedent Projects
  Kolumba Museum
  MASS MoCA
  Duisburg-Nord
“To understand a text, we need to interpret it. But, a certain understanding may lead us to consider a fresh interpretation. When the text is read in the light of the new interpretation, it may change our understanding of it.” –Darryl Davis

De_Fragmenting Building Narratives

The difficulty arises from determining how a building’s abandoned narrative can transcend into a phase of redevelopment where by in its new state of occupancy, the condition of abandonment is lost. Some adaptive reuse strategies incorporate the abandoned feature by framing it. This often leaves the abandoned elements of the building untouched. Although these features can create an interesting contrast between the old and the new, they often have no function other than for monument value only. These features are usually static and their “as is” condition is purely representational. The goal is to give a new reading to the architecture and evolve its interpretation to a different translation that contains an underlying system within its representation. Adaptive reuse with sensitivity to a building’s history including the ruinous or less favorable states can offer an enriching comprehensive narrative of a building. From the abandonment stage we can distill characteristics down to motifs and these motifs may give us a set of conditions in which a new design can be derived from the abandoned phase.

What do the changes and interactions that have occurred during the abandoned phase say about the building? What does the building “want” to be? The ways in which the building was used during its abandoned phase without human intervention may give an opportunity for reflection on the natural systems at work on the site. The fundamental idea of architecture is creating some form of enclosure that distinguishes the outside from the inside. We go to great lengths to

63 Darryl Davis, Visions of Mind, 98.
maintain this separation. We detail roofs to prevent water from entering the building. We have HVAC systems to create our own controlled environment within the larger environment. During abandonment, there is evidence that the outside world begins to seep into our built constructs.

10.1: A fragmented source can become de_fragmented in unexpecting and surprising ways
The four steps of conservation outlined by John Ashurt were: survey, definition, analysis, strategy and implementation. The methodology for this thesis proposes a few alterations including rearranging and adding to these steps as an alternative approach to adaptive reuse design that focuses more on the abandoned narrative (the phase typically lost in the architectural wormhole) by transcending it through interpretation and mimicry.

The first step, similar to Ashurst’s, is to conduct a historical survey of the buildings and its surroundings. This will aid in gathering information about the significance of the site within its larger context. This step will also identify the role of the building and important components of the site that gives it its unique sense of historical and cultural place. This step will aid in the analysis step of determining a hierarchy of important qualities and features. This designation of historical features will help determine what historical elements should be retained in the new design.

The second step is the forensic analysis of the current building and an identification of the conditions that can be attributed to its abandonment. These features are the most representative of the abandoned phase in the building’s life cycle. This step consists of analyzing and cataloging the physical features of the building. It is also important to conduct a biological survey on the building and study the “unplanned” morphology of the site. The natural ecology of the site grounds the building within its environmental context. This step is essentially the highlighting phase.

The third step is combining the historical survey from step one and the forensic analysis from step two to define the building in terms of its historical and physical features. The significant and critical features will inform the next phase of design.

The third step is an interpretation of the features. This may
come across spatially, materially, or visually. The spatial qualities of the building may have changed during its state of vacancy. Collapsed walls, roofs, or floors create new spatial arrangements, thresholds, and boundaries. The inside versus outside division is challenged in abandoned buildings as the natural environment begins to encroach and test the limits that would not normally be permissible in a maintained building. Barbed wire, chains, and metal panels are often material additions to an abandoned site to ward off unwanted intruders both human and animal. Visually, ruinous features can be seen on surfaces and as layers throughout the site.

The features of abandonment were distilled and reduced to their inherent qualities in the interpretation phase and now the fourth step is the translation of these qualities. These qualities are translated into motifs that can have architectural implications in the adaptive reuse design. These motifs translate primarily through mimicry of materials, patterns, or functions. The overall goal is to determine how the abandoned qualities can best be used as activating agents and generators for design rather than just static framing moments.

The fifth step is the implementation of the strategies into the adaptive reuse design.
11.1: Vignette series studying framing and pattern mimicry of ruinous features
Architectural works by Peter Zumthor, Bruner/Cott & Associates, and Latz + Partner are examples of adaptive reuse projects that successfully interpret, translate, and incorporate the ruinous phases of buildings into the new designs. The architects used different techniques to achieve an understanding of the buildings’ narratives.

Kolumba Museum

The Kolumba Museum in Cologne, Germany is a well-crafted and thoughtful adaptive reuse project by the architect Peter Zumthor. The museum’s site has a multitude of histories dating back to the Roman Empire. The late-Gothic church, St. Columba was built during the medieval times and was bombed in World War II. Only some of the church’s walls remained in fragments. Gottfried Bohm’s Madonna of the Ruins chapel was constructed in 1950. The site was excavated in the 1970’s and the Roman brick and stone fragments were then discovered. Zumthor wanted his design to respond to the Roman, Medieval, and WWII narratives of the building. Zumthor designed the museum’s walls to have perforations that would allow air and controlled light to enter the space that contained the ruins so that the ambient temperature and humidity would help to maintain and preserve the artifacts. The openings in the wall mimic a dematerialization of the brick, mimicking the fragmented church walls damaged by the bombs.

The jagged path through the ancient Roman and Medieval ruins creates moments for pause and forces views along the trajectory. The path culminates at the ancient sacristy. Tall, thin columns are used to delicately lift the new museum space above the ruins with minimal disturbance to the artifacts.64

64 Bettina Carrington, “Peter Zumthor Fuses a Historical Palimpsest with Modernism at Kolumba”, 79-87.
Zumthor integrated a variety of techniques in his design for the museum. This is an example where the existing conditions were primary drivers for the design. The integration of the old and the new interface can clearly be seen by the delineation of materials. The ruins are still read as fragments from the historical bombing.

12.3: Interior view of the medieval church before the WWII bombings

12.4: The city of Cologne was devastated following the WWII bombings. St. Columba is highlighted in red

12.5: A current bird’s eye view of Cologne with the Kolumba museum highlighted in red
12.6: First floor plan of the Kolumba Museum. The red circulation path zig-zags through the archeological area and ends in the sacristy.

12.7: Interior view of the archeological area.

12.8: Exterior view.

12.9: Section through the museum and archeological area.
A large abandoned mill complex in North Adams, Massachusetts became the site for the Massachusetts Museum of Contemporary Art (MASS MoCA) project. Built upon thirteen acres, the mill was composed of dozens of buildings. Its first tenant was the Arnold Print Works Company occupying the site from 1870-1942. The second tenant was Sprague Electric Company that took over the site until it closed in 1985. Looking for large gallery spaces to display artwork, the Williams College Museum of Art stumbled upon the abandoned mill complex in 1986 and determined it would be an ideal site for an art and cultural center.65

The architects carefully evaluated the layout of the buildings on the site and determined what buildings would be essential to the museum conversion and what buildings could be eliminated to help with the overarching goal of creating a successful and approachable museum. Architect Simeon Bruner wrote, “[The buildings] remain intact to give scale, context, and history, but they are thoroughly modified for the life as a museum. Like a grand collage, the product is almost independent of what made it. MASS MoCA is a new museum made from found buildings.”66 Working with a budget of $65/square foot, the most deteriorated buildings became the buildings with the most opportunity because it is less expensive to demolish than to construct. In some cases, entire deteriorating floors were removed to create large, open, multi-story gallery spaces. This is an instance where the abandoned nature of the building informed the design decision to remove the floors for its next phase: redevelopment.

“MASS MoCA retains what is historic, provides an exciting way  

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65 Jennifer Trainer, MASS MoCA, 11.
66 Jennifer Trainer, MASS MoCA, 113.
to use the new, and winds up creating a single new piece that is both old and new at the same time.”67 Bruner/Cott & Associates incorporated a range of both bold and subtle moves and strategies to integrate the old and new translations. One example of this is the new glazing in front entry vestibule. The “randomized” glass patterns represent the variation of glass over the building’s century-long existence. Many of the gallery spaces retain the walls in their found conditions.

Landscaping plays an important role in telling the story of the industrial complex. Building 3 on the site was cut down to its foundation walls and filled in with green space: a punch of vegetation in an otherwise hard, paved site. Courtyards serve as access paths and orientation devices for visitors.

67 Jennifer Trainer, MASS MoCA, 113.

12.13: Diagram of the failing floors removal to create higher spaces

12.14: Series showing the removal of a floor to create a double-height gallery space
“We did invent conventions, but they are deductive rather than inductive, reversing the usual process where program or design is superimposed on the existing building. This deductive process fosters site-specific solutions, respects history, and opens options not often available within the economics of new construction.”

The restraints on the site became design challenges and opportunities to merge the historical and abandoned narratives with the needs for the adaptive reuse program.

12.15: Gallery wall is left intact from the building’s abandoned phase

12.16: Cinema Courtyard

68 Jennifer Trainer, MASS MoCA, 119.
Landschaftspark Duisburg-Nord

Once an abandoned and polluted industrial area, Landschaftspark Duisburg-Nord of Meiderich, Germany has been converted into a public park and activity center. The complex containing blast furnaces, ore bunkers, gas tanks, workshops, turbines, and a wide array of other heavy industrial constructs was closed in 1985 leaving 8,000 steelworkers without jobs. The plant fell into a state of disrepair as it was overcome and degraded by the natural ecology on the site.69

Four years later, the plant was added to the IBA Emscher Park project list and a competition was announced for the redevelopment of the site. The design firm Latz + Partner were awarded the project.

The park became Peter Latz’s most notable project and was envisioned from the dynamic relationship between architectural design and the natural habitat. Latz was critical of Richard Haag’s Gas Works Park in Seattle because he believed the industrial plant was entirely taken out of its context and treated as a relic.70 His idea was to create a “narrative landscape” that translates the site’s past and present while projecting the future. In Latz’s design process, he “responds to the patterns of ecological disruptions, allowing these patterns to determine the shape of a new evolving ecology for the site” and these disruptions become “design determinants, providing an underlying ordering of structure.”71 This design philosophy attempts to integrate, shape, develop, and interlink existing patterns on a site with the needs and demands of the new program. Because of the site’s heavy industrial past, extreme and atypical soil and material conditions have surprisingly resulted in over 200 rare plant species sprouting and flourishing here.

Latz + Partner planted grids of trees and strategically placed other areas

69 Udo Weilacher, Syntax of Landscape, 105.
70 Udo Weilacher, Syntax of Landscape, 108.
71 Niall Kirkwood, Manufactured Sites,
of vegetation to provide a contrast to the naturally growing vegetation. This integration of natural and artificial flora results in an interesting reading and interpretation of the site.\textsuperscript{72}

\textsuperscript{72} Udo Weilacher, \textit{Syntax of Landscape}, 122-126.
Figure 12.22: Overall site plan covers 230 hectares of post-industrial landscape
Part Three //
The Application

Design Project
Site and Building History
Adaptive Reuse Proposal
Methodology Implementation
Site and Building History

The site for the adaptive reuse design project is located at 1510 Elm Street in Toledo’s north end. Five buildings are currently on the 0.848-acre site. The main building facing Elm Street is 112,700 square feet and six-stories high, making it the tallest building in the area. It was constructed in 1927 as the headquarters and coal yard for the Sam Davis Company, once Toledo’s largest retail coal dealer, major real-estate developer, and apartment operator. The Ann Arbor Railroad Line had a track branching to another building where coal was loaded into boxcars. The building complex was sold in the mid-1960’s to a janitorial and industrial supply firm. The site was sold in the 1990’s to Premier Bedding Co. who was the final tenant of the property before it was vacated in 2003. The complex has been abandoned since then.

At one time, the main building was recorded to have been finished with bronze entrance doors, black marble countertops, black walnut paneled walls, bronze ornamentation, oriental carpets, oil paintings and sculptures all of which have long been stripped away. All of the buildings on the site have broken windows, crumbing bricks, rusting metal, and graffiti.

The site is currently zoned ‘light industrial’ and is at the fringe of a single-family residential area as well as several other industrial and commercial business zones. Mulberry Park and Forest Cemetery are in close proximity to the site. The immediate adjacency of the North Toledo neighborhood with the site has become a source of contention within the community.
13.2: Conceptual site model of zoning forces acting on the site

13.3: The black rectangle represents the site and the zones surrounding it

13.4: Conceptual diagram of zoning forces acting on the site
13.5: Diagrams and images of the zones surrounding the site
13.6: Rendering of the building complex
The site is no longer remembered as being the headquarters for the successful coal company, supply firm, or the more recent bedding warehouse. It is now known as the crime scene of the 2009 murder of a twenty-year old girl. Cindy Sumner, a North Toledo resident diagnosed with muscular dystrophy and cerebral palsy, was last seen riding her bicycle near Jamie Farr Park on August 9, 2009. Cindy went missing for six weeks before her body was found on September 17 in the basement of the warehouse, partially submerged under water. The police report indicated blunt-forced trauma to her head.

Forty-four year old Elhadi Robbins, a registered sex offender, was charged for the murder of Cindy. The two had been acquaintances, but Cindy’s family was unaware of Robbins’ troubled past. Several homeless people living in or near the Elm Street warehouse reported that Robbins was seen frequenting the property. The discovery of his tennis shoe at the crime scene led to forensic evidence of his involvement in the murder. Robbins was charged with two counts of murder. The horrific crime devastated the Sumner family and the local community.

Even before the Sumner case, local residents had described the abandoned warehouse as a nuisance. Bob Mossing, Toledo Municipal Court judge and Toledo Code Enforcement Management said, “The building is a nuisance. I’d like to demolish the thing if I could, but we’d have to have money and it would be pretty expensive.” The estimate for demolishing the structures is $384,000. Area neighbor Demesha Walker said, “I hear everything that goes on in that building, from the kids playing to the brick throwing.” Another area neighbor, Ybonne Blackwell said, “Tear that building down and do it in loving memory. Put a garden there. Put a pool there. Something we ain’t got over here. A playground, something for the kids.” Shortly after Cindy was found, the city spent $5,000 on custom-fit metal panels to board up the building to
prevent access and future incidents. Today, the building still stands in disrepair: a haunting reminder of a terrible crime and an innocent life lost too soon.

The building has been termed bad for both physical and social reasons. Physically, the building has been neglected and has been open to the environmental elements since its abandonment. Reports of flooding in the basement indicate plumbing issues and leaking issues. The inner wood construction may be rotting from the water damage. The exterior masonry is deteriorating and the bricks are crumbling in piles. Windows are broken allowing inclement weather conditions to penetrate the building shell. Graffiti on the façade and upper windows indicate vandals’ entrance into the building and access to upper floors. Additional vandalism inside the building will need to be assessed. It is the building’s physical state of being abandoned that has resulted in some of the social problems concerning the building.

Socially the building is condemned because of the unwanted activity that occurs at the site when people know they ware not under surveillance. Reports of drug exchange, gang activity, and squatters have made the site dangerous. The building’s close proximity to a local neighborhood makes it even more of a nuisance as it affects people and their nearby properties and land values. The 2009 death of Cindy Sumner was a defining moment in the history of the building and one that Toledo residents will not soon forget.

The city of Toledo has confiscated the 1510 Elm St. property but currently has no plans to sell, renovate, or demolish the buildings on the site. The lack of surveillance on the site makes it a liability. The city is not collecting any taxes from the property so it would be advantageous for the city to sell it to a developer.
13.10: Zoning adjacencies create tension in the North Toledo neighborhood.
Adaptive Reuse Proposal

The proposal for the 1510 Elm Street complex is to adapt it into the Toledo Metroparks Community Gardening and Recreation Center. The current buildings and their existing abandoned conditions help to define the new programmatic functions of the spaces. The building complex will act as an entrance and extension to the adjacent Mulberry Park. Building 1 will contain a café on the first floor, a meeting room on the second floor, and the Lucas County Metroparks’ offices on the third floor. Building 2 will be converted into a two-story gallery and special event space. Building 3 will be a bicycle repair and rental shop. Building 4, being the smallest and most recent, will be removed to make way for a new lobby space with a rooftop terrace. Building 4’s roofline is the basis for the terrace, so the building is still represented in the adaptive reuse design. Building 5 will be a multi-use building with a farmer’s market on the ground level.
Methodology Implementation

The five-step strategy outlined in Part Two, can be applied to the Elm Street building.

Step 1: Historical Survey

The Sam Davis Co. was the largest coal distribution company in Northwest Ohio. Its location is adjacent to the Ann Arbor Railroad system that transported the coal throughout the city. The long, linear form of Building 3 on the site allowed for the train cars to pull-up next to the building so materials could be loaded into the freight cars.

Step 2: Forensic Analysis

The Elm Street complex has fallen into ruins due to the lack of maintenance and surveillance on the site. Rusting metal panels fill the ground floor window and door openings to prevent intruders from entering the building. Broken windows and graffiti are signs of vandalism on the site. Building 3 and Building 5 have natural vegetation growing on their south facades. Other indications of ruins include material degradation, fire damage, and structural deficiencies.

Step 3: Interpretation

The prevalence of broken glass on the second and third stories of the buildings creates a the condition of indoor/outdoor continuity. The interior of the building becomes open to the exterior elements and the threshold between inside and outside becomes blurred. Another example is the metal paneling along the first floor of the northwest facades. This rusting metal paneling was put in place to create privacy for the neighbors with properties near the site. The paneling also acts as a screen or barrier preventing outsiders from getting into the building.

13.12: A catalogue of the abandoned features found on the site
13.13: Forensic analysis of the east elevation
Step 4: Translation

The indoor/outdoor continuity condition can be carried through into the new design. Bays along Building 1’s second and third floor provide opportunities for large glazing surfaces as well as outdoor balcony areas. The rust striations on the metal panels form a patterning system that can inform the patterning of a metal screen system that is a part of the building façade in Building 1, but pulls away from the building, undulating and fluctuating more and more as it nears the organic nature of the park. The screen provides a privacy barrier for the nearby residents from the bike path. Conceptually, the screen indicates a departure from the systematized, built structure to a more natural and flowing pattern.

Step 5: Implementation

Many of these translations can be combined to form a new reading of the building in its adaptive reuse design.

13.14: Forensic analysis of the south elevation
13.15: Forensic analysis of the west elevation
Observation // Translation // Application

broken glass

- Removal of the glazing allows for the inside to be more open to the exterior environment.

- Interior glazing provides views to the outside and balconies are open to the outside.

- Iteration of glazing and balcony combination.

metal panels

- Metal panels prevent unwanted trespassing and maintain privacy at the ground level.

- Metal panels become the main surface treatment and wrap the ground level elevations.

vegetative growth

- Natural vegetation grows on the southeast facade of building 2 and between the crevices of the pavement.

- The south faces of building 2 are used as awnings for vertical gardening and the area in front for a garden with concrete pavers.

13.16: Series of abandoned conditions translated to new designs
13.17: Metal panels function as a privacy screen within the building’s concrete frame.

13.18: Metal panels are pulled away from the building to screen the bike path and bring additional light into the space.

13.19: The bike path creates a privacy barrier between public and private zones.
Conclusion

Through this investigation, the role of the abandoned phase of a building’s life has been called into question. Ruins have played a significant role in teaching us about history and the past societies from which we have descended. We find ruins intriguing because they offer conditions in which we typically do not see or experience in our built world. The abandoned phase is not one that should be lost disregarded in an adaptive reuse project. Instead, they offer us opportunities to activate the abandoned phase, not by simply framing it in time, but through transcendence in which the ruin becomes a generator for a new design.
Bibliography


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