TRANSITIONAL SPACE IN ARCHITECTURE:
ELEMENTS AND PROFOUND EXPERIENCES

by

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ABSTRACT

Architecture is commonly discussed in terms of individual buildings—the enclosures in our lives which we consider to define “inside.” Architectural elements usually demarcate these spaces, but most dialogues typically deal separately with either the interior space created within a building or the exterior space created by a building and the surrounding urban fabric. However, the issue specifically addressed in this thesis is the creation of provocative experiences in architectural transitional spaces: the liminal intervals created as a consequence of overlapping interior (building) and exterior (nature), and how they can instill wonder unachievable using only creations of humankind.

Throughout history, the ongoing search for “the garden,” the pristine landscape that we as a society idealize, consistently presents us as humans with a seemingly contradictory reality. At one extreme, solitary nature lacks the most basic of human needs: shelter. That which seems perfect is unattainable in this respect, since it cannot sustain human life and mankind’s need for progress. On the other hand, the disregard of society for how a city must be formed in harmony with the natural environment has proved to be an agent of poverty, overcrowding, and revolting pollution—a state also not conducive to human dwelling, comfort, and health.
This point is what makes transitional space so intriguing and offers the potential for extraordinary architectural space. Transitional space bridges the gap between solely interior and solely exterior. These spaces, in being transitional, take people from “outside” and through the overlap of nature and building, transfer individuals to a destination defined as “inside.” In doing this, transitional space helps to ease architecture’s interaction with the natural environment, creating a relationship rather than a conflict. The peaceful resolution of man and nature is, arguably, what we as humans have been attempting to accomplish for all of history. Using the environment as an architectural element is our admitting that nature has produced something more evocative than we can create ourselves.

Transitional spaces are potential agents of unmatched experiential, intellectual, and sensory stimulators. They have also functioned as, and can once again become, the successful mediation of humans upon the earth. The earth, left to its own, regulates itself—it achieves a balance through the interrelation of all its systems. It is now understood that humans, as a species, have disturbed this balance through our activities. Transitional space, or more specifically overlapped interior and exterior space, has the unique quality as an architectural system of relying on nature without damaging nature. In doing so, transitional space can accomplish what it once did by default: regulate the thermal qualities, create opportunities for illumination, increase the regional relevancy, etc., of a building without harming nature but by working in harmony with the environment.
Nature and building possess an interesting quality and similarity in that both can instill happiness and fear. However, together they can create not only beautiful spaces and experiences but a responsible relationship between architecture and the environment.

This thesis analyzes humankind’s desire for nature, explores how transitional space can be created to meet this need, considers precedents of successful transitional space, and studies specifically how transitional space can be applied.
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INTRODUCTION

The ability of architecture to produce awe and inspirational experiences for its spectators and users has been understood since humans began creating structures more complex than purely utilitarian shelters. Stories of these phenomenal experiences have been told over time; one such tale is that of the Prince of Kiev in the 10th century, who, being so amazed at the beauty of the Hagia Sophia basilica (Figure 0-1), was said to have thought he had entered heaven, and upon returning to his country initiated the conversion of all of Russia to Christianity. This is but one example of the immense power architecture can hold. I am in no way attempting to reduce in importance the impact architecture in this fashion can make. However, this thesis will specifically analyze the multifaceted experiences created as a consequence of overlapping interiorities and exteriorities—the transitional spaces created over time, those we interact with daily, and ways in which we can better incorporate transitional spaces into future architecture.
Perhaps the desire for nature that most people seem to share stems from some evolitional longing for a condition of dwelling that once was. Or these idealistic notions may be cultural, originating from such traditions as the Garden of Eden and the like.

The search for “the garden,” the pristine landscape pursued by many for thousands of years, was initiated first in an American context by the European discovery of the New World, and later by the dilapidation and appalling living conditions of cities during the Industrial Revolution. In the first instance, the untouched wilderness of the New World presented the explorers of Europe with two seemingly contradictory realities: the
existence of what had always been dreamed of (the garden) but also the potential
extinction of all that Western society had accomplished to that point (the city). At one
extreme, solitary nature lacks the most basic of human needs: shelter. That which seems
perfect is unattainable in this respect, since it cannot sustain human life and mankind’s
need for progress. On the other hand, the disregard of man for how a city must be
formed has also proved to be an agent of poverty, overcrowding, and revolting
pollution—a state also not conducive to human dwelling, comfort, and health.

This point is what makes transitional space, at least in a philosophical sense, so
intriguing and offers the potential for extraordinary architectural space. Transitional
space bridges the gap between solely interior and solely exterior. These spaces, in being
transitional, take people from “outside” and through the overlap of nature and building,
transfer them to a destination defined by the architecture as “inside.” In doing this,
transitional space helps to ease architecture’s relationship with the natural environment,
creating a relationship rather than a conflict. The peaceful resolution of man and nature
is, arguably, what we as humans have been attempting to accomplish for all of history.
Using the environment as an architectural element is our admitting that nature has
produced something more evocative than we can create ourselves.

The use of nature to create transitional space certainly can consist of using plant life—as
in the Hanging Gardens of Babylon (Figure 0-2) and Central Park in New York City
(Figure 0-3). It can also be simply the exposure to open-air, the feeling of “outside,” to
connect architecture to nature. This occurs in the relationship between the Propylaea
and the interior buildings of the Acropolis of Athens or even the colonnade surrounding
the once-enclosed rooms of the Parthenon (Figure 0-4).

Figure 0-2: 16th century engraving depicting the ancient city of Babylon.

Figure 0-3: New York City’s Central Park.
The journey of entering the Louvre in Paris (Figure 0-5) uses a strong connection to a plaza (which itself is sometimes used as gallery space), surrounding buildings, and the open air to create the transition from urban Paris to enclosed, carefully controlled museum. Transitional space does not, however, exist only unidirectionally. The courtyards of the de Young Museum in San Francisco’s Golden Gate Park (Figure 0-6) evokes a strong understanding of exiting and re-entering the Park, while providing a unique transition in each direction. It incorporates strong vertical views of sky, tree-line, and the colors (because of the building’s oxidized copper skin) of the surrounding flora, thereby establishing its relationship with the organic Park. In each of these examples, nature contributes a fundamental quality to the experience that we, as humans, could not fabricate.
We have successful examples of such spaces all over the world. In fact, one could argue that in all of humanity’s struggles to find or create the ideal landscape over the centuries, the prospect of the built environment coexisting with nature brings to light a
solution towards a possible utopia. Transitional spaces, while being agents of unmatched experiential, intellectual, and sensory stimulators, have also functioned—and can once again become—the successful mediation of humans upon the earth. The earth, left to its own, regulates itself—it achieves a balance through the interrelation of all its systems. It is now understood that humans, as a species, have disturbed this balance through our activities.

Transitional space, or more specifically in this context, overlapped interior and exterior space, has the unique quality as an architectural system of relying on nature without damaging nature. What is essential and requisite for overlapped space to exist is that nature must be inherently respected and preserved in such applications. Having this relationship with the earth, transitional spaces can transmit the beneficial equilibrium of nature beyond themselves—inward to further layers of architectural interior—and in this way cause a shift in the overall building design philosophy. Doing so, transitional space can accomplish what it once did by default: regulate the thermal qualities, create opportunities for illumination, increase the regional relevancy, etc., of a building using low-technology and sustainable approaches. This is achieved not because complicated methods of engineering force it to, but because it fundamentally must do so. A connection to exterior mandates the need to take on attributes of that exterior. If this relationship is accomplished in a positive manner the primary goals of the “green” movement, the recent campaign for sustainability in our society, could be accomplished in a powerful way.
Nature has been seen as both euphoric and menacing; an immaculate beauty eternally longed for and an untamed beast beyond human control. Ironically, the same can be said of the edifices of mankind and the cities we have created. The result, however, of when the most positive aspects of both are allowed to coexist, to blend in situ, is that they together can become some of the most profound, enlightening, and enduring architectural space ever created. The following chapters explore how examples of such spaces have endured over time, analyzes their qualitative and quantitative components to gain insight into why they elicit such unparalleled responses, deconstructs natural and manmade elements of transitional space to understand the exact effects of one on the other, and forms conjecture on how this overlap of space can better not only architecture but architecture’s interaction and impact on the world.
I. THE HUMAN NEED AND DESIRE FOR A CONNECTION TO NATURE

A. HUMANS AND NATURE FROM PREHISTORY TO THE 15th CENTURY

The fascination, intrigue, and longing to be among nature have been a part of the human condition since the beginnings of recorded history. From the time our evolitional predecessors emerged from the African jungle and began to walk upright, our desire to return to the savanna which nurtured and cultivated the upbringing of our species has become a recurrent theme in the chronicle of the development of human environments. As these predecessors came down from the treetops and made their way to the savanna, they encountered not a purely “natural” landscape, but a part of the African wilderness which had been leveled and maintained by the large elephant herds and other great mammals of the time (Hiss, 1990, pp. xvi-xvii). We (in our pre-evolutionary state) joined grazing species of the area, taking part in the savannah ecosystem. We took advantage of the warm and vista-creating flatlands, which gave us greater perspective and thus greater security, as the staging ground to proliferate.

The conflict we have struggled with in this continuous desire to be among nature, however, is its discordance with a basic human need. The three necessities for human life consist of food, water, and shelter—the last of which must be found or manufactured. The result is this simple paradox: we must either exist among nature and
live in a mode of survival rather than progression, or we must create a barrier against
nature in order to use our energies to achieve greater intelligence and civilization. As
the “megamammals” created the first arena of tamed nature for our species (Hiss, 1990,
p. xvii), from this example to the present-day we have continued the process of shaping
the natural landscape to provide for our needs.

This pattern of taming nature, the shift from the unpredictable to the ordered and calm,
seems to have expanded from the African flatlands to become an integral part of how
societies around the world came to see creation. From the cradle of civilization,
Mesopotamia, to the other early river cultures where complex societies emerged (the
Indus River in India, the Yellow River in China, and the Nile River in Egypt) and the
subsequent peoples each initiated, the perceived human connection to nature becomes
paramount. In the chronicles of all these people as to how the world was fashioned, the
main theme consistently details a move from the chaotic to a world of order and peace.
This takes place either as a result of natural occurrences, the arranging of elements by
gods or other higher powers, or the resolution of great wars (either involving humans or
solely a conflict among godlike beings). In all the cases, the way the world is impacted,
arranged, or formed is the main product of the event, and the human interaction with
this new environment is the most important outcome of the epic.

These stories created a connection to nature in both cultural and religious terms, but
most importantly they hearken back to how humans first interacted with an un-hostile
nature in an evolutionary setting. As Western society developed, civilization spread
from the Fertile Crescent westward to Egypt, Asia Minor, the Mediterranean regions, and throughout Europe. The varying climatic conditions of these regions and advancements in technology led to a greater distinction between human edifice and the natural world. Cities indeed changed dramatically from the proto-urban “mound” dwellings of Sumer and Babylon, which were built out of the earth, to the semi-enclosed spaces of classical Greece and finally culminating in the clearly defined and developed interiors of Roman construction.

Figure I-1: The Great Ziggurat of Ur.
Figure I-2: Temple at Aphrodisias.

Figure I-3: Artist’s rendition of the Pantheon interior in its original form.
Although the intrinsic connection with nature has been shown to be inclusive of all human beings regardless of geographic region, the main focus of this thesis is specifically how people of the Western world came to identify with nature and the subsequent relationships derived from their particular viewpoint. This is done because a limited range of investigation is necessary to provide an adequate degree of concise, detailed analysis, but also to examine transitional space in terms appropriate for this year’s senior studio project, the design of which will be informed by this research, a media charter school in downtown Salt Lake City.

B. WILDERNESS AND NATURE IN COLONIAL AMERICA

As cities in Europe grew and densified, the idea of expansion took hold in an effort to sustain each respective kingdom or empire and increase in power. During all of this, the allure of the perfect and pristine landscape, the Garden, endured in the European mind. Undoubtedly fueled by culture and Judeo-Christian tradition, Europeans continuously sought the Garden of Eden typology, the eternal example of perfection. As overcrowding and industry quickly became a problem in cities, living conditions declined, and urban Europe was rapidly seen as a disgusting abomination. Urbanity became the counterpoint to the perfect natural Garden.

Perhaps for this reason more than any other, when America was colonized, the European explorers were elated at the prospect it embodied. The implications of finding the pristine, untouched, vast landscape which was America indeed brought euphoria to the Europeans. Everything humankind had longed and searched for over the
centuries—Utopia, Zion, the Promised Land, Arcadia, or Cokaygne—whatever it happened to be termed, at last the possibility of such a place seemed within reach. Once again, the opportunity for a fresh start appeared. A new way of thinking about how we as humans apply ourselves to nature in its original form presented itself to (in their minds) the most advanced civilization on earth.

Immediately, however, this brings the inherent problem that humans have faced all along in such a situation. The decision to inhabit a place necessitates the need to make it inhabitable, and thus the pristine pastoral landscape loses its purity. This presented both a problem and a fear for the settlers: to start anew in America meant to disturb perfect nature while attaining that which had always been sought. Concurrently, it meant abandoning the representation of what European society had accomplished to this point, everything encapsulated by the city (Marx, 2000, p. 45).

The chronicle of the development of America leads to the condition we are all familiar with today. The colonization of New England resulted in cities similar to those in Europe, places like New York and Boston which are no more connected to natural America than Paris or London were to their respective landscapes. Thomas Jefferson considered the ideal existence for Americans the farming lifestyle. He believed America would be a nation of agriculture and the filthy, leaving unsightly industrial functions to be dealt with by Europe (Marx, 2000, pp. 88-144). Obviously the actual outcome of America is a far cry from Jefferson’s vision for our country. The important factor of
America’s development, however, is the continuous migration toward the untouched country.

Although Jefferson’s ambition for the pastoral American lifestyle did not materialize, and while the earliest European settlements did not turn into the magnificent Garden the settlers wanted, the vastness of America still provided hope. The pattern of continuously moving towards nature, towards the border of human interference, continued from this point in America to the present time. The record of migration within America during the 19th and 20th centuries can be succinctly described as a constant westward voyage. From the time when the term “West” meant Louisiana and Oklahoma until Americans crossed the continent from the Atlantic Ocean to the Pacific, multiple generations of pioneers pressed on westward in search of more farmland, new land to call home, and above all, the re-immersion into nature. So strong was the human need for (and the concurrent availability of) nature in this case, that the pastoral landscape became the picturesque landscape. This version of the perfect existence exemplified the Jeffersonian ideal and epitomized a situation that was quickly becoming unachievable and illogical.

To fully understand what humans attempt to derive from nature, the view of what nature is in the Western mind must be clarified. A large difference exists between the notions of “nature” and “wilderness.” Although the pastoral mindset would view America’s great expanse as “nature,” much of the process of colonizing America dealt with taming the new and unknown “wilderness.” Wilderness in the American and
European tradition typically has embodied the dangerous and unknown. Wild beasts, unknown threats, and unpredictability have always been the barriers humans have had to overcome when faced with wilderness as the opponent (Nash, 1967). The victory against wilderness transforms the unknown into that which man can cultivate and inhabit—nature. In America, the treks westward were consistently filled with difficult terrain, threat of Native American attack, and the mysterious wildlife the forest contained. With the triumph over these frightening notions, however, the desire to dwell among the tamed environment once again returned.

C. THE AMERICAN ATTITUDE IN THE 20TH CENTURY

Humans cannot and do not exist in isolation but always as part of a greater whole. Any progress civilization has made has had the prerequisite of occurring within a society. As the frontier moved further west until there was no frontier at all, the people of America congregated to create cities across the country, as humans have done throughout all history. The Industrial Revolution, however, led to the decay of American cities similar to what previously had occurred in Europe. Urban centers turned from fruitful centers of human collaboration to horrible byproducts of the industrial “machine.” And once again, Americans attempted to flee to nature.

Lacking a frontier to escape to, however, this time an artificial boundary was created. The “urban flight” that followed World War I and continued until the close of the 20th century created the homogenous and sprawling suburbs (Figure I-3), now regarded as a normal mode of living. Instead of an exodus in order to find and immerse oneself in
nature, Americans removed themselves to a “safe” distance from the city and bought a piece of nature for themselves. This mentality materialized in the form of the archetypal well-kept green lawn characteristic of suburban dwellings, in this way implanting “nature” in our lives.

The final episode in Americans’ chase of nature is, ironically, the current return to the city. Due to many factors, including the realization of the negative effects of the schism of our societal and urban fabric and the understanding of the inherent sustainability of urban life and its role in the “green” movement, advocacy of urban living has emerged at the forefront of the protection of our natural world. Therefore, once again, we pursue the path of least resistance towards establishing the closest relationship possible with nature.
It is perhaps the understanding of the artificiality of the suburban version of “nature” that pushed us most to revitalize and re-inhabit our cities. While the concept of ordering or taming nature is not a new idea to any degree, a stark difference exists between an organized nature and a completely artificial and un-natural nature. Attempting to create this interaction and rationale has been mostly unsuccessful, however. Ordering or making nature understandable and unthreatening is almost an absolute requirement for incorporating the natural world into our lives in any reasonable fashion, as will be discussed later, but outright fabricating a sterile landscape from natural elements does not bring any of the aesthetic, emotional, or meaningful human responses that are sought in the first place.

Various methods of incorporating nature into an urban typology have been attempted over time, but two examples in particular stand out in a contemporary context as being artificial creations of nature rather than true integrations. At the turn of the 20th century, Ebenezer Howard proposed the Garden City scheme for urban planning (Figure I-4), where “garden cities,” or green-belt-like towns, would be separated from the central cities, and have their populations capped. This was meant to limit sprawl while integrating a strong natural element into city typologies.
Not a half-century later, Le Corbusier proposed the Radiant City (Figure I-5), his version of the Utopian urban scheme. In the Radiant City, Corbusier criticized the Garden City's inefficiency and extent of separation of people from their occupations. Therefore, he considered his proposal a "vertical garden city," where land use was kept to a minimum, and the open space taken up by massive residential skyscrapers was reconciled through garden roofs.
In each of these cases, the introduction of the natural world onto both building and urban fabric is foreign and un-integrated. For nature to function properly, it must be allowed exist in its natural way, not as how we might prefer it to exist. The important quality of nature is that left to its own, it sustains itself. A balance is achieved among all things occurring naturally on earth. Along with the experience created through the integration of nature and building, this balance is the single best way to analyze the success of natural/human interaction. It is for this reason that the Garden City, the Radiant City, and the suburbs were all unsuccessful concepts. They failed to give humans what they always desired, even in the presence of the seemingly infinite American realm of possibility.

The problem of both nature by itself and excessive separation (ignorant building) is that neither allows us, as human beings, to exist in a balance with everything that surrounds
us. We cannot progress solely among nature, nor can we live starkly separate from our environment without restlessness for return to nature. The logical solution in our built environment that addresses this issue of connecting humans with nature, as this thesis explores, is transitional spaces in architecture. Transitional spaces overlap the qualities of interiority and exteriority, creating liminal spaces where nature and building each accomplish their respective tasks while relating in a non-threatening way to each other. As humans must coexist with the earth, so do building and site coexist in meaningful ways through well-designed space possessing qualities of both interior and exterior. It is this quality in architecture which creates transitional space. Transitional space is the mediation and balance of human intervention and nature, an area with blurred borders which moves individuals from point to point and even allows them to linger.

D. TRANSITIONAL SPACE AS A MEANS OF CONNECTING TO NATURE

Connection to nature has been shown to be an essential human need that has existed from the beginning of man’s quest for civilization and society. Transitional space not only fulfills this need, but provides opportunities for unprecedented architectural experiences and unparalleled spaces. The use of transitional space first accepts the fact that we require nature to be at peace with our immediate environment, but also that elements exist which are compatible with our shelters—our architecture— which we cannot fabricate ourselves. In using these natural components in our architecture, the experience becomes one which combines both the marvel at humankind’s achievement
and the awe at the un-manufacturable part of us. This leads to creating the prospect of
unique and unparalleled inspirational moments of architectural experience.

In the context of designing a school in an urban environment, the value of transitional
space cannot be overemphasized. Typical elements of suburban schools—single-storey
organization, large outdoor grass fields, playgrounds, etc.—bring obvious problems
when dealing with urban-size lots and typologies. Urban lots are generally of a smaller
acreage, commonly narrow, and typically neighbor existing buildings. This, if not
addressed properly, can lead to difficult building circulation (due to the need for
verticality), lack of green space, and loss of surveillance of human traffic flow through
the school. Transitional space in this setting gives direction and means for solving the
design problems associated with such constraints. If exterior and interior spaces do not
necessarily have to be distinct and separate, spaces can be condensed and refined to
accomplish more through overlap. “Green space” then does not have to be a
playground or sports field completely separate from the building. Entry to the
building’s core functions can be buffered and made monitor-able by the transition. The
building can be “unsealed” even if it becomes tall, responding to and bringing in nature
on both the horizontal and vertical planes to soften building circulation and assist with
building health.

Healthy spaces are essential when accommodating young students, both in terms of not
propagating illness and also creating a productive learning environment. It is now
commonly understood that elements such as abundant natural light and views to the
exterior of a building are conducive to a better educational experience. Equally important to a productive school is the quality of air. Recycled, filtered air in sealed buildings has led to a condition known as “sick building syndrome,” a phenomenon clearly unwelcome in an environment specifically for children. Transitional space can address all of these issues by its very nature, while adding many more layers of vitality to a building. The need to sustain natural elements requires natural light, and many times this light penetrates deep within a building. Visual connection to the exterior is commonly a byproduct of the overlap of interior and exterior. Lastly, through the use of not only operable windows, but also more innovative methods, air and natural ventilation become crucial and integral component of overlapped space.

The human quest for inhabitable nature is perpetual. It has been shown that from humankind’s earliest forms of existence to its most modern of architectural interventions, the desire to return to an environment that once was—nature—has endured. Transitional space as included in a way of thinking about architecture and as a means of action accomplishes this goal in a responsible and beautiful manner, intervening and mediating between the completely uncontrollable character of nature and fully-regulated human-made environments within buildings. The positive effects of overlapped interior/exterior space are especially important in serving as a design solution for an inner-city school, as will be discussed in subsequent chapters. As transitional space is broken down and analyzed in terms of its comprising elements,
formal organization, and patterns of use, the methods of using overlapped space to produce better architecture will be shown.
II. ELEMENTS OF TRANSITIONAL ARCHITECTURAL SPACE

Le Corbusier writes in *Towards a New Architecture* that all successful and true forms of architecture throughout history can be reduced to an inventory of the standardized components of the time. He argues, for example, that the Parthenon is nothing more than one distinct combination of simple elements from the classical Greek “catalog.” Doric columns, pediments, architraves, entablatures, etc. all come together in a specific arrangement to solve the design problem at hand. Whether or not his blanket theory on how all perfect architecture is formed holds true, the notion of architecture as parts forming a cohesive whole can certainly be applied to all works of architecture. Every building can be reduced and analyzed in terms of its physical parts or formal spatial arrangement. In this respect, natural elements very easily can be elicited to become actors in the drama of architecture, thus becoming usable components of the architectural language. Due to the almost countless methods of creating transitional space, this thesis focuses specifically on a select few, without the intention of alluding to an exclusive list of how nature can become a building element. The analysis consists of the use of nature in terms of plant life and landscaping, introduction of exterior atmosphere, erosion or voids in building mass, formal building gestures, and the resulting sensory perceptions from the introduction of the exterior.
The human response to nature is essentially what transitional spaces attempt to evoke. It has been shown that an intrinsic connection and longing for nature among humans exist, and transitional space is one means of meeting that desire while also fulfilling the need and functions of architecture. Nature, as with any architectural element, brings with it a specific set of experiential and sensory qualities. The non-synthetic character of nature, however, embodies a specific connection and set of elements that cannot be replicated by human fabrication. It is this specific response to a certain set of qualities that creates profound architectural space. Each means of incorporating transitional space, or the combination of methods, introduces a new set of aesthetic issues and human response to a space. Incorporating multiple methods of defining transitional space further enhances the connection with nature, and it is through the careful design of such space that the proper response can be derived.

An obvious method of introducing nature into a building is through plant life and landscape. This involves treating “green-scape” as an architectural element, available as a design component with special characteristics. As such, to truly become part of the form of transitional space, a natural element must become part of the architecture by following the same design philosophy. Each building embodies a set of rules which are established during the design process, therefore being understood as a cohesive work. In using plant life as part of the design, the same architectural language and intent must be exhibited by both the natural and human-fabricated elements of the building. Anne W. Spirn states in *The Language of Landscape* that, “Landscape has all the features of
language. It contains the equivalent of words and parts of speech—patterns of shape, structure, material formation, and function” (Spirn, 1998, p. 15). However, the use of greenery in transitional space must not be constrained or confused as simply landscape architecture. Transitional space is architecture and landscape occurring simultaneously, without distinct boundaries.

To use plant life successfully, the needs and requirements of the plants become an inherent addition to the design problem. Plants require natural ventilation, abundant natural light, and water—similar to what human beings also require. This, then, begins to speak to building attributes and form. The unique problem for each building to solve is how to bring in sun, air, light, and even, perhaps, rain and snow while still providing the human need for a certain amount of shelter. Taking into account these new requirements, it is helpful to think of transitional space not as optional space within a building, complicating the task of keeping destructive nature out, but as a necessary element which allows the opportunity to fine-tune the amount of exterior allowed to diffuse inside. In this mindset, the default is not a building completely sealed off from the outside but the lack of any impermeable barrier in the first place. Therefore, transitional space can be thought of as a “screen,” restricting the flow of outside-in, as well as initially defining “inside” (Nitschke, 1993, p. 85).

Secondly, the notion of an ordered or integrated landscape comes into play. Individual plants can, of course, play a role in this green-scape, but this has more to do with thinking about greenery as a surface. Referring to landscape in these terms makes it
easy to think of such an element as architectural, since surface is a well-understood compositional element. Ordered nature as a part of transitional space and as an integrated building element is most common and fundamental in the gardens of China, Japan, and Korea (Inaji, 1998, pp. ix-x). Specifically in Japan, two distinct methods of considering transitional space exist, the act of placing building on the garden (ie-niwa) and the imbedding of garden within building (machiya) (Nitschke, 1993, p. 87).

Figure II-1: Building within garden, *ie-niwa*.

Figure II-2: Garden within building, *machiya*.
In each case, the surface, volume, or spatial quality of the garden creates the transitional space, or rather it breaks down and blurs the interior/exterior definition, resulting in the *en-gawa* (Nitschke, 1993, p. 87). These “transactional” spaces, dynamic both in their function, materiality, aesthetic, and experience are not unique to Japan, however, as they occur in various forms in buildings around the world. As a surface, landscape can be horizontal, vertical, or at any angle or curvature. In creating transitional space, landscape can act as a part of a whole of the path between an origin and destination either at the entrance or within the building as well as create entire spaces acting as transitional space, once again either at the fringe or within the building.

How we, as humans, perceive the distinction between “inside” and “outside” has much to do with the level of environmental control within a building. It is for this reason that a large element of transitional space can be, and often is, the introduction of the exterior atmosphere within a space. This is not to say that an office building with operable windows constitutes transitional space. In that instance, building and enclosure are heavily prioritized over interaction with the exterior. Also, transitional space mandates the need for an origin and a destination, even if the transitional area encourages lingering. The permeation of natural atmosphere (the air existing outside the building), the, must be a confident and intentional design move, introducing both the composition and ambiance of the outside air. This potentially leads to, for example, large openings in walls or ceiling (whether permanent or operable). Instilling the feeling of “open-air” brings a certain aesthetic as well as a profound response to the building, allowing the
architecture to exhibit something more than itself. In incorporating landscape with this second element of atmosphere, it begins to become apparent how both, working together, create a definite overlap of exterior and interior while relating to and sustaining one another.

A third method of generating transitional space is through the creation of voids or erosion in the building mass. When solid building recedes to create an open area (i.e. a courtyard), it produces an opportunity to introduce natural elements into the negative space. This, once again, can occur either at a building entry or within the central mass of the building in order to link exterior and interior spaces. In this way, interior courtyards and passages can further blur the boundary of the building and introduce nature into the architecture. Where natural elements begin to occupy the voids in the building mass, the critical event of nature used as an architectural language occurs. Since the conscious decision to use plant life, green-scape, etc., is exhibited, it becomes part of the building and thus an architectural decision. This establishes the specific distinction between landscape architecture, which deals with the site surrounding a building, and landscape as architecture or architecture as landscape, both of which embody a realm of thought where landscape and building are one.

Voids are a very distinct thing. Building erosion, on the other hand, can blur the line between synthetic and natural in a much more incomprehensible way. Whether seemingly systematically or organically created, this erosion of building form can be used as a framework which nature can inhabit. If the erosion extends to the ground
plane, entire floor levels or rooftops of buildings can become overlapped interior/exterior space.

In a less deconstructive manner, buildings can define and articulate transitional space in other ways. Gestures by building form or elements can serve as arteries for extending the influence and feeling of a building without necessarily enclosing it. Therefore, a sense of interiority can be applied to the landscape surrounding the building, allowing designed transitional space to occur in these areas. Examples of building elements which define space but do not enclose it include columns and arches. A colonnade or an arcade can define large areas, associating them with a respective building, without necessarily creating a completely interior space. The vast openings between elements not only allow natural landscape and air to flow through this transitional space but also frame views to both the exterior and interior.

In addition to vertical structural elements, transitional space can be defined by planes or forms which do not even touch the ground. In Japanese architecture, the long roof eaves create an occupiable sphere underneath them, called the “noki-shita,” (Figure II-3) which creates the aforementioned “transactional space” (Nitschke, 1993, p. 85). Since the overhangs define space beyond the enclosure as belonging to the building while incorporating climate and landscape, these too create transitional space. The boundary of the building is both blurred and specifically defined, creating a dynamic relationship between architecture and site.
As the counterpoint of spatial definition by overhead elements, transitional space also can occur when a building makes a formal gesture purely on the ground plane. The element of path becomes a key means of organization in this way adding to the logic and legibility of the building, while creating a smoother transition to the interior and generating a more profound entry statement. Using the materials or design aesthetics of the building, elevation change of the ground, or other similar methods, the edifice can begin to exhibit an influence on its users in this manner before it completely encloses them. Especially with today’s seemingly limitless architectural possibilities, complex building form is no unusual notion. A building’s form can reach into the landscape, embrace or wrap around a certain area or even redefine the topography of the surroundings. Not limited to these examples, an architectural form can create transitional space in countless ways. It can create one or multiple boundaries or edges, either physical or implied, and the transitional space can occur within these boundaries. The level of enclosure, visual and physical connection to the outside, and level of
transparency are all tools the architect can use to create an appropriate means of overlapping the building with elements of exterior.

The main requirement for any of these design methods to create transitional space transcends any completely quantitative means of determining when a space indeed becomes transitional. Although various elements can come together to encourage or attempt to generate transitional space, the defining factor of when a space truly becomes transitional is mostly based on the sensory experiences that space conveys to its occupants. A person’s feeling of nature (as discussed in the previous chapter) as well as identifiable influence of the building must be conveyed to the people using the space, thereby bridging the gap between architecture and nature in a qualitative way.

All five senses can contribute to a sensation and understanding of both outside and inside through an individual’s sensory perceptions of the space. Allowing natural air to flow into a transitional space, for example, triggers specific sensory memories through the senses—the feeling of air moving across the skin, the smell of outside atmosphere, and to a certain extent the unique taste of natural air compared to processed ventilation. Our sense of smell connects us to a specific surrounding environment; for example the smells of a mountainous field opposed to a dense urban setting. The visual connection of transitional spaces with the outside is much more pronounced than simply looking to the outside through a window, as in completely interior spaces. Since transitional spaces are to a large extent exterior, framed views, panoramas, and vistas become much larger and dramatic, conveying the feeling of being within nature due to the amount of
openness or connection with the landscape. In the same manner, the aural perceptions in the transitional space are more enhanced compared to when a person is in a completely enclosed area of the building.

Finally, the sensory experience through touch can be an important participant in conveying the liminal nature of the space. Since both exterior and interior elements are combined, the textures and materials of the transitional space could embody a “softer” feel than interiors usually do. Fewer edges, integrated landscape and foliage, and less hard surface can all contribute to this perception.

We as humans respond to nature and natural elements in a much different way than to our own built environment (Nash, 1967, p. 1). The connection and built-in emotions and feelings we have toward nature characterize natural components in architecture as a unique tool in creating very specific experiences and conveying certain aesthetic qualities. Unique methods of incorporating the “outside”—landscape, atmosphere, solid/void, building components, and sensory perception—elicit a unique and emotional response to the natural world. Transitional spaces accomplish this while still creating a sense of defined space and an understanding of being within architecture through the obvious human intervention on a site—human-made materials and a composed order. In this way, nature can be extended and introduced into building and vice versa. The important consideration is that by attempting to create well-crafted transitional space, the space becomes dynamic—embodies something more than if it was conventional building space. The perceived relationship of the building to the natural world is the
means through which architecture can take on extraordinary qualities through its transitional space.
III. PRECEDENTS OF SUCCESSFUL TRANSITIONAL SPACE

The ambiguity surrounding transitional space in terms of how it is created, what experiences it can produce, and whether it has occurred successfully is best resolved by analyzing relevant precedents in our built environment. Pertinent examples of transitional space exhibit the characteristics described in the previous sections of this thesis, namely the successful overlap of building and nature, the introduction and impact of exterior on interior and vice versa, and the shaping of extraordinary experiences and spaces as a result of these interventions. As with any design problem and process, an investigation of what has already been attempted and accomplished is essential to the progression. Therefore, this analysis of several buildings not only contributes to the inquiry into transitional space but also serves to inform the process of designing the media charter school project.

I would like to begin my precedent analysis with two examples that incorporate transitional space purely by defining an open-air area using architectural elements. The first example, the Parthenon, is historical, while the second, Toyo Ito’s Serpentine Pavilion, serves as a contemporary model. The Parthenon is, of course, the pinnacle of all classical building by the ancient Greeks. Its monumentality and significance cannot be overstated when discussing its historical relevance. The ideals and values of those
who built the Parthenon led to its style and form as an expression of what they conceived as true and perfect—forever encapsulating their culture in the building. It is therefore interesting that as part of the Athenians’ views of what truth, order, and reason consisted, a transitional space and strong tie to the exterior was incorporated.

The Parthenon was, in its original entirety, essentially comprised of a perimeter colonnade with an inset mass containing two rooms (Figure III-2). This creates three distinct volumes of spaces: one per room and one defined by the space in between the colonnade and the center mass. The fact that the transitional space between the outside and the interior rooms is an essential element in the design of the Parthenon, giving it its characteristic permeable appearance, is significant because it shows how a connection to nature was valued by the designers.
This overlapped space and the design intention could still be experienced in its original entirety until the Parthenon was closed off for restoration. Whether as a ruin or as it was first completed, however, the Parthenon is much more powerful when experienced from its transitional space. Looking outward, the massive scale aids in creating a panoramic view of the city of Athens, however this vista is not only visual, as the sounds and smells of the city can also be absorbed. The columns initiate a repetition which moves the spectator around the perimeter of the building, while creating an ongoing series of frames, focusing attention on segments of the city rather than presenting an undefined overall view (Figures III-1, III-3). The openness, transparency, and changing nature of the experience are the contributors to the success of the transitional space.
The Serpentine Pavilions in the city of London are temporary structures which inherently must address an interior/exterior relationship because of their typology. The pavilion as a building type employs a loosely defined enclosure to create a sheltered but not necessarily completely sealed space. The prototypical model of a pavilion includes an overhang or roof supported by columns or minimal walls, spatial definition and protection from the elements resulting from this method of constructing pavilions. The rendition of the Serpentine Pavilion by Toyo Ito in 2002 was unique in that its form was articulated much more as an enclosed volume than other years’ versions; however it created one large overlapped space. Like the Parthenon, the quality of light, the articulation of entrance and exit, and the framing of views inside-out and outside-in all contributed to a dynamic experience.
Where the Parthenon accomplishes these aesthetic qualities in an orderly and calculated manner, the forms of Ito’s pavilion are much more fragmented and polygonal. The two approaches to bringing building and nature closer together, however, are very similar.

In an older, traditional Japanese context, the Katsura Imperial Villa uses specific techniques to establish its connection with nature. The campus on which the villa itself is sited is an extensive “stroll style” Japanese garden, a pinnacle point for Japanese garden design (Ohara, 1993, p. 5). Therefore, a strong presence of nature already exists, and users of the villa must interact with the natural elements to reach the building itself. However, a much more dynamic experience of the landscape is achieved with the simplistic method in which the villa’s elements are articulated.
First, the villa incorporates traditional Japanese sliding screens into the design (Figure III-5). These screens, when opened, completely dematerialize the enclosure, allowing entire walls of rooms to become open to the exterior. The bringing in of the "outside" is the first step toward creating the transitional experience. Second, when the screens are slid open, platforms are exposed which extend the room’s floor outward toward the landscape. In the case of the “Veranda and Platform for the Moon,” (Figure III-6) the patio itself and the rest of the building are articulated in such a way that everything except for the platform floor disappears, leaving the viewer with the sense of being suspended above the Katsura-gawa River and surrounded by trees (Ohara, 1993, p. 11).
These peaceful yet evocative moments, in their sensorial qualities and element of surprise, give the Katsura Imperial Villa as well as other traditional Japanese buildings their rich and dynamic experiences.

The period of Modernism in architecture, even with all its shortcomings, produced several good examples of transitional spaces in its buildings. Louis Kahn and Le Corbusier both designed buildings in India which incorporate impressive transitional space. In Kahn’s India Institute of Management, Ahmedabad (IIMA), the architectural element of “wall” and the ways in which the language of a wall (the element’s interaction with both the rest of the architecture and the human) can be articulated and what message it can communicate was investigated. Rather than being an element of enclosure and barrier, as a wall typically is, Kahn instead uses the outermost walls of the
Institute as an opportunity to create a sense of the building opening up to the exterior and to the inner courtyards.

These walls create a corridor between the exterior of the building and the inner walls, which actually enclose the interior spaces. The interplay between the two walls is especially interesting and unique. Architectural elements and openings in the outer walls are translated and coordinated with the articulation of the inner walls, creating opportunity for ventilation and abundant natural light (Figure III-7). The aesthetic quality of these liminal spaces used as circulation provide the opportunity for shelter while still maintaining a feeling of “outside”—a quality of space more enclosed than the previous precedents but still transitional and overlapped nonetheless.

![Diagram of the promenade with labels for openings, interior wall, light & air, promenade, courtyard overlook, exterior wall.]

Figure III-7: Detail section of the promenade.

The contrast between the methods and versions of transitional space speak to the unique conditions of each environment. In the IIMA, the thick masonry walls act as
thermal mass, both shielding the interior masses from direct sunlight and using the cool night air to radiate heat away from the building.

The semi-enclosed corridors also serve as means for funneling breezes throughout the building, combating the humid Indian air by encouraging air motion. For this building, the transitional space not only becomes an experiential element but a practical one. Low-technological means of creating thermal qualities through the architecture and the overlap of exterior and interior resulted in a logical solution.

Kahn’s contemporary, Le Corbusier, also built in India with carefully designed and considered transitional space. Corbusier’s method, specifically in India’s Assembly of the High Court (Figure III-9) building involved large overhanging roofs, creating

Figure III-8: Detail image of the promenade.
implied transitional space on the ground plane, similar to Japanese “transactional space” discussed in chapter two (Figure III-10).

The open-air spaces under the roof plane then penetrate deep into the building, creating very large overlapped spaces and, as in Kahn’s building, shielding the interior from direct sunlight. The transitional space in the Assembly takes place in its portico area, where the region under the roof overhang is separated into several segments by large walls of béton brut. This general typology was taken by Corbusier from India’s vernacular architectural examples and restyled in a modern manner (Prakash, 2002, pp. 22-54). These walls become key elements in the transitional space due to the
introduction of voids in their mass, creating light apertures and framed views, connecting even the outmost edge of the space with the natural environment.

As a final example from the Modern era, another of Kahn’s works, the Kimball Art Center, articulates transitional space in a slightly different manner. The organization of the building is a series of barrel-vaulted spaces lined up next to each other, and the transitional space occurs in this building by following the same form and language as the enclosed space. The repetition of the arching roof continues past the last enclosed volume to create one final canopy over an open volume of space. This outdoor space, the pavilion, is legible as a continuation of the building form, thus establishing a firm relation to the building. At the same time, devoid of any specific features in its own volume, it serves as a sun-shaded area in which the surrounding water and greenery play a primary role.
In a contemporary American context, a wonderfully experiential piece of architecture which exhibits dynamic transitional space is the de Young Museum by the Swiss firm Herzog & de Meuron (Figure III-12).
The de Young is located in San Francisco’s Golden Gate Park, with the massive urban oasis surrounding the building. The relationship to nature in the design of this building was inherent; foliage and garden permeate throughout the site, making the need to address nature unavoidable. The response to the design problem Jacques Herzog and Pierre de Meuron developed, however, is anything but the standard approach. They felt the need to ensure the patrons of the museum were always aware of nature, constantly interacting with nature, and engaging as much in a dialogue with nature as with the art the museum houses.

According to Jacque Herzog, “nature had to be foremost” as the design process for the de Young began (Ketcham, 2005). Rather than creating the building as an intellectual exercise, Herzog & de Meuron rationally analyzed what was needed, what was appropriate, and what the interior experiences should be. The Golden Gate Park was the “given” and the starting point for informing the design of the museum. The philosophical goal of admitting nature into the building and allowing openness to the park was realized in the voids created by a three-band plan.
In this way, the Golden Gate Park remains continuous through the building, breaking down the overall mass of the box. The wedge-shaped cutouts in the mass form the four garden courtyards, which provide the storyline for the interaction with nature as people circulate through the building.

The experiential qualities of the de Young’s transitional space begin from the first approach. The entire building is clad in perforated and dimpled copper panels, which establish the first nod toward nature. The pattern on the copper was derived from an abstracted positive/negative composition of the immediate foliage surrounding the site. The material itself, copper, was chosen because of the relation to and compatibility with the other colors of the site—the plant life, soil, rocks, etc. Although not intended to blend in but rather distinctively relate with the park, the de Young alludes to nature with its entire self, starting from the façade.
The first space passed through while entering the building is the entrance courtyard. This is accessed by a large rectangular opening in the façade, lacking doors and any enclosure. As one passes through this corridor, the walls and ceiling decrease the enormity of the overall building, making it understandable at a human scale. The narrowing of surroundings then opens into the courtyard itself, a comfortable space containing plants and boulders and open to the sky above. In fact, the shape of the courtyard against the sky is the most provocative way this particular space accomplishes the goal of transitional space. Together with the breezes through the courtyard, views to the Music Concourse, and the manner in which the treetops of the surrounding park and the sky are framed by the courtyard’s walls, all the compositional elements contribute to a very profound transitional experience.

Figure III-14: Views into and from the de Young’s entry court.
From the first courtyard, the main entrance to the building leads the visitor to the primary circulation space, beginning the journey of moving through the museum while watching the performance of nature as it interacts with the architecture. From the many galleries, the interaction of nature is achieved through the erosion of the building mass as it recedes in several areas to form gardens. Herzog & de Meuron used layers of glass at various angles to create blurred interior wall definition through reflection and sight lines. This contributes to the illusion of the building disappearing, providing views to the green-scape and thus achieving a constant connection with nature. The eucalyptus and fern courts are easily accessible and become part of the circulation, simply understood as rooms of the building rather than instilling a feeling of departure or exit.

The architecture of the interior consistently alludes back to nature in part because Herzog & de Meuron wanted to break out of the “white box” standard for museums. The “white box” approach describes the blandness and neutrality of modern museums, an accepted norm. However, with the de Young’s setting, diversity of collections, and specifically an African collection with a strong connection to its landscape, the integration of multiple transitional spaces and the use of nature as a strong element in the architecture was a logical design solution. In the de Young, transitional space enhances not only arrival and departure but also the holistic effect of the entire experience.

The importance of transitional space holds a special potential in the design of schools, as discussed in chapter one. However, the programmatic requirements of a school
introduce an additional set of difficulties to incorporating transitional space successfully.

One school that solves both the problem of the educational requirements and the incorporation of transitional space is the Primary School Paschalis & Crèche Jonas located in The Hague, The Netherlands. The Paschalis School was designed by the Dutch firm Atelier PRO and completed in 2004. The school is situated around a chestnut tree which already existed on the site prior to construction. The building is particularly interesting in terms of how the programmatic spaces were resolved in relation to the tree, which eventually became the centerpiece for the school’s grand courtyard.

![Figure III-15: The relationship between the classrooms and courtyard creates a large multi-purpose transitional space.](image)

The school is articulated around the chestnut tree and orient the classrooms and circulation towards the courtyard. The classrooms all include large overhead doors to the exterior, allowing an entire wall of each class to open directly to the courtyard, thus extending the classroom to include this middle-ground. The courtyard also functions as the primary circulation collector—a large outdoor “hallway” of sorts. Spaces such as the gymnasium, auditorium, and other gathering areas are located on opposite wings,
requiring the users of the school to cross the courtyard in order to access the different functions of the school. In doing so, the students and faculty interact and linger among the courtyard’s tree and other landscape features. Lastly, due to the large amount of glazing that is used, the views to the courtyard ensure a constant visual connection to the green-scape elements of the school as one navigates throughout each individual building wing. Functioning as classroom, circulator, and a commons, the courtyard of the Paschalis School becomes a uniquely interactive transitional space. It transports individuals between the building’s two wings and also serves as an intermediary between public and private space.

As exhibited in these examples, the precedent of successful transitional space does not occur in any specific fashion. No formula can be applied, and no blanket-statements can be made about how to overlap building and nature in any particular application. The design of transitional space, much like the exercise of architectural investigation in general, is limited to a case-by-case basis. Good transitional space is consequential of the design philosophy of any particular design process and the appropriate form of integration of nature based on locale. Transitional space is not separate from the rest of a building; it is not something that can be added on as an afterthought. True and inspirational transitional space is an integral part of a building’s architecture, a fulfillment of the needs of both humans and the environment. These precedents show several ways in which transitional space has been accomplished well. Learning the
approach to overlapping elements of interior and exterior, rather than a specific method and/or solution, is the valuable lesson learned from these works.
IV. TRANSITIONAL SPACE IN A MEDIA CHARTER SCHOOL

The final senior design studio in the School of Architecture concerns an integrated project which incorporates all spring semester courses taken by an architecture student. This includes designing and sizing a structure, selecting and integrating the environmental control system, and completing a written research portion for the project. In this case, the studio project also serves as a laboratory for applying the knowledge and inferences gained from the first three chapters of this thesis to a realistic scenario. Therefore, the research and conclusions from this thesis were used to inform the design process of my studio project—the design of a media-based charter school to be located in downtown Salt Lake City. As explained in chapter one, a connection to nature (which can be accomplished through transitional space) is integral in a learning environment because of the healthier spaces which can be created, the increased productivity and performance of the students and teachers, and the programmatic problems which can be solved with transitional space. I therefore regarded a heavily integrated natural element in the design of my building as not only a suggestive motivator but a requirement. As such, both a visual and physical connection to nature was emphasized at all times during the design process, driving the formal arrangement of the programmatic elements and informing every aspect of the design.
The site for the school is on the corner of 200 South and 500 West in the Salt Lake City downtown Warehouse District. The two streets have distinctly different characters, 200 South being the primary street with a large amount of motor and pedestrian traffic, a light rail line, and a nearly continuous street wall containing businesses and housing. 500 West is a less active street, used mostly to connect the west side of the Gateway shopping center to the historic Rio Grande train station (now serving as commercial space) and 400 South, a major boulevard. Therefore, two means of entry were incorporated, articulated differently in each instance. The south façade is accessed either from walking along 200 South or after disembarking from the Old GreekTown TRAX station, which is located directly in front of the school. The visitor is first engaged by the building with a series of rectangular frames on street level. These wood-clad frames are
sized twenty feet wide by twelve feet tall and positioned at the front of the lot—in line with the existing overall street wall (Figure IV-2).

![Figure IV-2: Site plan; the Media School relates to the existing street wall and urban scheme.](image)

However, as one steps through the frames it becomes apparent that they have not entered a building in the traditional sense; there are no doors, no windows, no enclosure other than a ceiling overhead and walls in front of the person, leading him or her further back. This transitional area is the public gallery, where students’ work can be displayed in an accessible location. Since the entry is transparent and open, the character, color, and vibrancy of student work becomes the identity of the school on the street level, as the projects are in sight from the sidewalk.
Visitors thus are introduced to both the spirit and function of the school as they first interact with the building, allowing the casual passerby interest on the street as well as the potential student family a glimpse as to what the school is currently producing. Because the gallery is a transitional space, it allows a greater traffic flow and thus a larger exposure of the students’ work than would occur with a traditional storefront window gallery. It also invites a closer proximity and interaction with the school and the gallery because of the lack of “hard” barriers. Stepping from the gallery through one more frame, the user passes into the main courtyard, which will be addressed shortly.
While the 200 South entrance serves primarily to link the school to the public realm, those who attend the media school and use it daily would typically utilize the entrance on 500 West. This street elevation provides a drop-off for parents and buses, and a direct path into the main courtyard.

The entrance is articulated and defined by a vertical wooden trellis which “wraps” a majority of the building. In this instance, the trellis meets the ground, framing several possible entry points and also a “green” path into the main courtyard. The path is a
landscaped wedge leading into the center of the lot, full of shrubs and trees. It leads from the sidewalk to the courtyard bordered on one side by the trellis and on the other side by the main building mass, which recedes and gives way to the greenery.

The approach to the main courtyard is the most powerful transitional space of the school. It is articulated very deliberately as a literal erosion of building mass from the natural elements of the green path, as the path itself widens the further one continues. The green path consists of purely natural elements (trees, grasses, etc.) and the interplay between hard building surface on one side of the path and the loosely defined enclosure of the trellis on the east side creates a truly liminal space which allows both the architecture and nature to enhance a person’s experience. The trellis frames views of the sky and the surrounding cityscape, and the landscaping of the path and the subsequent courtyard provide ideal areas for educational activities, presentations, outdoor studio spaces, or simply for students to study under the shade of a tree.

The fact that this courtyard exists also as a transitional space incorporates a greater set of experiences into the architecture. Being among both the beauty of architecture and nature creates a unique array of aesthetics. The courtyard obviously displays an architectural intent, a human intervention via the natural elements. This allows us to experience specific things only nature can contribute and reactions only building can elicit simultaneously. The feeling of being in nature is distinct in that it relates to each sense variably; sight, touch, taste, sound, and smell are all affected randomly depending on the wind, rain, etc. The antithesis of this specific experience is how architecture
relates to humans. In buildings, we find a purposeful intent to produce usefulness and beauty through the creation of a predictable environment. The interplay between these two realities—the predictability of human-made edifices and the dynamic outdoors creates the profound experience found in the main courtyard, as well as the other transitional spaces in the school.

As one experiences the main courtyard in the context of this duality—the dialogue between the built and the natural—the observer is, of course, inhabiting an area of trees and other green-scape. From this position, through the glazing of the outdoor atrium walls, one sees students on every floor of the building walking to class, to lunch, or to one of the media rooms. The sounds of the school—the students, lessons, and events—can all be heard and experienced from the courtyard as well. On the other side of the courtyard, views of the Wasatch Mountains, downtown Salt Lake City, and the University residential district are afforded, all interpreted through the trellis framework. Those who experience the space can feel the breeze blow, the sun across their skin, the smells of the green-scape and the city, and the somewhat-buffered sounds of the cars, TRAX trains, and pedestrians outside the school.

The main courtyard serves as the celebratory space of the building. It functions as the climax of the main transitional spaces (the gallery and the trellis entry), as a way-finding element constantly in view from the main circulation loop, and as an outdoor atrium, infusing a large amount of light into the core of the building and distributing this light to every storey. The strong connection to nature via its landscaping and the manner in
which it frames the sky, while becoming more enclosed than the approach, continues the
dialog of building with nature and creates one more layer of transition. From this green
space, the main entrance for the enclosed portion of the building is accessible, and this
doorway brings the individual into the commons, a “nodal” space which gives access to
the stairway, elevator, administration offices, restrooms, kindergarten thru third-grade
classrooms, and the secondary courtyard (Figure IV-6).

![Figure IV-6: Main floor plan.](image)

The classrooms for grades four thru twelve are located south of the main courtyard,
while all other programmatic elements are to its north. The stairway and elevator shafts
are located in the center of the building but north of the courtyard as well. Therefore, as
the students enter the school and attend class every day, they must circulate around the
main courtyard, which provides a strong visual connection to the natural elements
therein. This circulation path also takes advantage of the ample natural light provided
by the courtyard atrium. This light filters into the classrooms, and screens can be opened to the court to provide natural ventilation. Therefore, even without going outside again, the courtyard serves as a transitional space on every floor to every classroom.

The secondary courtyard mentioned earlier functions in a similar but simplified way as the main courtyard. This smaller court both defines an entry and creates a gathering spot. From the faculty parking lot, the secondary courtyard creates a sense of entry similar to the main entrance by providing a green space which serves as a transitional area between outside and in. Also similarly, this courtyard functions as an outdoor atrium, bringing light and ventilation to every storey of the building. Accessed from both the central communal area and directly from the teacher’s lounge, students and faculty can gather in this court to study or eat lunch.

Once again, the experience of the place relies on both the specific qualities of the dualistic nature of transitional space as well as the dialogue between the built and natural elements. Being in the presence of the trees and other green-scape features, a certain tranquility and serenity allows the faculty, students, and visitors a brief escape and relief from the energetic pace of the city, their daily work, or any events that the school may be hosting. Similar to the main courtyard, this secondary court creates natural cooling view the landscaping and the breezes that are allowed to flow through. The western sun, filtered when appropriate by the trellis, also shines into the courtyard and warms the space. Finally, any precipitation that occurs falls directly into the
courtyard. These climatic interactions provide visual, auditory, tactile, and olfactory sensory responses. Views outward are oriented toward the western Salt Lake Valley and the Oquirrh Mountains. Looking through the glazing inward, views are revealed of students and faculty circulating through the main volume of the building, to and from the studio, computer labs, auditorium, and lunch room.

Viewed from overhead, the school’s form can be seen as “eroding” to yield to the natural elements of the two courtyards, and the interaction between building and nature can be easily interpreted. In this relationship, the two courtyards bring with them one of the most effective tools of transitional space. Since natural elements (trees, shrubs, grasses, etc.) are used, the building form had to be articulated in such a way as to allow air, rain, and sun to the greenery. Therefore, this requirement is what allowed such a large degree of sunlight and natural ventilation to be delivered to the building’s interior.

Figure IV-7: Overhead view; courtyards allow sun and wind to reach the interior of the building.
It was necessary for the courtyards to be open to the sky to deliver water to the plants, and sunlight was drawn in from the east and west. The main courtyard receives primarily morning and noontime daylight, while the secondary courtyard is oriented to take advantage of the western afternoon sunlight. The way the two courtyards are positioned allows the prominent wind path to come through the trellis to the main courtyard, filter throughout the main building volume via operable windows, and exit on the west elevation through the secondary courtyard. The southern classrooms function in the same way, by taking air in on the south façade, and allowing it to flow into the main courtyard. The cross-ventilation the entire building experiences would achieve a comfortable thermal level for most of the year, negating the need for excessive artificial cooling systems.

The classrooms, as a form, are distinct from the primary building mass, and are articulated as extruded frames (similar to the entry frames on the ground level), forming classroom “tubes.” These tubes, then, as a type, express their function on the exterior of the school in contrast to the overall building form. Each classroom tube, being the primary learning space, also incorporates private transitional space. The surrounding trellis provides both vertical barriers and a means of housing louvers for sun shading. Horizontal trellises then are introduced and extend beyond each classroom to create an extruded ceiling.

These two trellises shelter and spatially define outdoor patios for each classroom. This creates spatial definition and provides seasonal sun shading on the horizontal and
vertical planes. Ivy and other foliage can grow along the trellis, creating a “green screen” and contributing to the space’s connection to nature. The patios themselves are extensions of the classrooms. The interior of the “tubes” and the trellis-enclosed patios are separated by a simple sliding glass panel system, which allows the entire frame of each “tube” to become completely open. Thus, the patios, which can house trees, grasses, etc., do not become merely outdoor classrooms but unique sections of larger rooms. These patio extensions can be used for special activities, workspace, group projects, or simply as a means of providing more space for seating during lectures and lessons—all while bringing in fresh air, panoramic views of Salt Lake City, and the tactile and sensorial engagement with greenery and natural elements.

Figure IV-8: Details of classroom patios and trellis.

As students circulate throughout the building to the lunchroom, digital production areas, library, design studios, workshop area, and auditorium, they are constantly
reminded of the school’s relation to the incorporated natural elements. As stated previously, the primary volume-to-classroom circulation occurs entirely around the main courtyard. The secondary stretch of circulation always passes the secondary courtyard. The relationship between these two courts produces a rhythm and a consistency with respect to the understanding and the experience of the building. Even in the enclosed parts of the school, the constant visual impact of natural elements as opposed to hard, synthetic surfaces allows greenery and foliage to be as much part of the interior visual aesthetic of the school as is the manmade plaster, paint, and treated wood.

The top floor of the building is dedicated to the school’s library. This level provides the most glazing and views outward, with a high, sky-lit ceiling, to create a pinnacle space. The uppermost storey, which would be most disconnected from the ground-level courts, actually houses the largest amount of green space. Above the southern classrooms and the north studio, green roofs are incorporated to give the library a series of outdoor reading rooms, benefiting from all the landscaping and shade that the courtyards also contain.
The specific consideration of how natural elements interact with the school creates an experience that allows the perception of nature to permeate throughout the building both horizontally and vertically throughout the masses and volumes. The school is situated on an urban site; therefore “nature” in its purest form does not exist there.

What can be done, and thus has been proposed, is an incorporation of various natural “green” elements to bring to the site what cannot be built: the connection and sensorial experiences that humans desire and need. The natural aspects and areas of the school do not function as auxiliary spaces but become integral parts of the learning process, especially in this type of school. Nature expressed in the form of the transitional spaces serves to both satisfy the human longing for such environments and also to create experiences unmatched in today’s traditional school design. The transitional spaces, for the user of the architecture, create profound moments in their own right and heighten
the reaction and anticipation when fully entering the building. In this way the interaction between “nature” and building, through transitional space, contribute to a healthier, richer learning experience for the school’s students while also creating evocative and experiential architectural spaces and relationships.

Figure IV-10: View of school from street-level.
CONCLUSION

The inquiries and lines of thought addressed in this thesis are not meant to be all-encompassing on the issue of transitional space. The intent also is not to provide a universal solution for creating remarkable spaces or establishing a more responsible connection to nature through our architecture. The examples, methods, and case studies presented merely are meant to provide discussion as to how, through transitional space, our architecture can improve. In today’s world circumstances, we are faced with social, economic, and climactic problems which we must address, and the ideas contained in this thesis provide a particular route as to how improvement towards an end can be made.

By integrating natural components in a meaningful way, if we can establish a closer relationship between architecture and humans, then the hardest task—the creation of the public’s affection for its built environment—has largely begun to be solved. Thus by analyzing why, in fact, humans desire nature and how transitional space fulfills this need, we can begin to shape our building typologies toward this end. In this thesis, various elements and methods have been surveyed in their ability to create transitional space. This is not a complete catalog of such items, for the quantity is limitless. However, to begin to understand what types of experiences and physical elements
contribute to an overlap of building and nature, the architectural interventions and precedents in this thesis were studied because of their apparent success in that respect. Further, in the design project of a Media Charter School for Salt Lake City, specific elements were chosen from the wide range of possible means and methods studied in this thesis. The components and schemes of integrating transitional space that were selected are specific to the design problem and the site, accomplishing a successful overlap of building and nature in the context of this project.

Transitional spaces hold a certain power and opportunity to create extraordinary spaces which speak to a fundamental human need and longing for nature while providing practical architectural solutions. Space consisting of overlapped interior and exterior is unique as an opportunity in that it not only betters the quality of life for its human users but lessens our impact on the earth. The integration of nature and building contributes to a more sustainable architecture, both environmentally and in terms of longevity, because if people feel a greater connection to their architecture, the likelihood of its endurance over time increases exponentially.
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