



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1993 Volume I: The Symbolic Language of Architecture and Public Monuments

Buildings as Backdrops

Curriculum Unit 93.01.02
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Introduction/Architecture and Art

Architecture is not a laboratory science where ideas are hatched in test tubes and confined to the realm of pure academics. Nor is it an art to be viewed with a certain degree of separatism as something one must access in a specialized setting such as a museum, gallery or the homes of those with means to afford it. The beauty of architecture lies in its accessibility and its experience is quite direct. Those who possess the gift of sight, who contain within the seeds of curiosity, can explore the repertoire of offerings architecture has to offer. They can look upon a building and marvel at engineering feats, at structural elements (and how they mimic or defy nature), at the use of design, scale, proportion, symmetry and ornamentation. They can appreciate the interweaving of materials, the use of line, Color, texture. Once this appreciation is gained and then deepened, it can prove to be life changing. It can infuse the student of architecture with the deep relationship between the natural and the man-made. By viewing buildings, they can learn to read the language of different eras, to enjoy the symbology of different times. As the student becomes steeped in such experiences, they will naturally feel more connected to the universality of man and what he has created.

One underlying assumption of this project is that all of us contain a creative core, energy that can, with the application of technique, training and insight, be applied in numerous ways. Just as the areas of art and science are blended in the realm of architecture, likewise the creative core can intermarry experiences. Otherwise stated, the same energy that allows one to create or even appreciate a drawing can be applied in the field of dance, art, drama and so forth. Thus, this project attempts to marry several fields, without imprisoning each within strict boundaries. In the simplest of terms, a basic knowledge of architecture will be used to inspire creations in the world of drama. But what are plays without words (with apologies to pantomimes)? Thus, we will use the written word in the form of play writing and improvisational acting to further evolve the creative experience. And, just for fun, since students of the fifth through eighth grades (for which this unit can be adapted) are so intrigued by drawing, the element of cartooning is also introduced.

In essence, the students will learn about architecture, visit buildings, make sketches or cartoons of what they see, create three dimensional models, create improvisational routines based on their experiences, and write and act in a short skit. The end result, thus, would most likely be an infusion of creativity, molded by the guidelines of architecture. Students will see this wonderful interconnection between the arts and between nature, which is at the core of much of architecture. It will provide them with a forum to explore, and thus, to expand.

Architecture and Language

“Just because there is a word does not mean there is a pure essence to match it,” said John Summerson in “The Classical Language of Architecture” in explaining the complexity of achieving purity in architecture. For writers, this is an intriguing thought: how can language pinpoint both the emotional and the experiential, as well as, on a more linear level, the technical and the mathematical and, on a spiritual level, the transcendental. In a play, words are building blocks which actors enhance with pauses, expressions, movements, the building and release of tension, and the colorings of the inner landscape.

It seems that buildings—although initially viewed as fixed and silent objects by many—serve ultimately the same function through their architectural linguistics. In the art of creation, the architect has embodied his or her own grasp and blending of the vocabulary to various degrees of fluency creating for the astute observer a story to be read, explored and ultimately absorbed. For example, through the use of rustication—defined by Summerson as “a rough, countrified way of laying stones, each stone retaining some of the individuality it had when hewn from the quarry”—George Dance conceived the old Newgate Prison, a building that bespoke well of the terrors it held. By contrast, the enclosed forecourt of The Piazza of St. Peter’s in Rome by Bernini captured the sentiment of processional reverence. Its curved regiments of massive columns stand four deep, forming a deeply expressive colonnade mixing Tuscan, Doric and Ionic orders. One could imagine walking through this forest of columns where jewels of sunlight fall at will, and the air between the columns is layered with spiritual intensity.

It is not hard for children to see the emotions that buildings can evoke. It can be reduced to simple language regarding buildings and their components. What does barbed wire symbolize, what feeling is created by a marble fireplace with a highly decorative mantle? What is the emotional difference between a Doric and a Corinthian column? How about when they are spaced in different proportions, capped with a pediment, covered with a dome.

Architecture is indeed a living language. But it must be learned and listened to before fluency can be built. This project will allow students to become aware of what has often been discarded without due attention—the rich, variegated classical landscape of the downtown New Haven. Once a working knowledge is obtained of architectural elements, orders and styles, the students will be able to use buildings and/or their components to precipitate action.

This, of course, is the opposite of what we expect in the world of the theater, where the play is conceived in the studio of the mind, where set design is an add-on component of the process, as much art as semantics allowing for the flow of moment and advantageous display of action. The set provides the framework for the action, and subtly underscores plotting, emotion, and often provides elements of foreshadowing. Poor set design runs the risk of melting into irrelevancy as the play progresses, or worse, serving as a detractor.

Imagine, for a moment, the reversal—the extension of the language of architecture into a verbal vocabulary. In the most simplistic terms, we might ask, “If I were a Corinthian column, what story would I tell?” “If I were a pergola, what would the wind whisper about in its journey through my bones. “ Architecture inspires action; space inspires story.

Objectives

1. For students to obtain a historical overview of classical architecture and Victorian including styles and components.
2. For students to develop a working vocabulary of architecture.
3. For students to learn to recognize architectural elements as they relate to several buildings including Woolsey, Sterling Library and the Post Office and/or the Court House.
4. For students to have a hand-on experience through either flat pattern or three dimensional design using a “kit of parts”.
5. For students to gain an interpretive sense of architecture through cartooning and/or drawing.
6. For students to relate the language of architecture with the language of the theater.
7. For students to learn to “listen” to architecture and capture its essence through the written word in monologues and plays.
8. For students to use architecture to precipitate action in the improvisational arena.

Overview

According to conventional wisdom, the first home of men were caves, those natural crevices in the earth's surface that provided warmth, protection and privacy. Early architecture is somewhat easy to imagine—sticks, stumps, tree trunks, palm fronds, branches, vines components pieced together to establish homes and gathering places. Much was made for a while about the philosopher Laugier's *Essai sur Architecture* which ignited a sort of “back to the roots” mentality in the mid-1700's as he pictured the “rustic cabin” of primitive man, claiming it to be “the model upon which all magnificence of architecture have been imagined.” It featured single load-bearing columns and a tented roof.

We have, of course, no telescope to the past, but it seems certain of the emergence and dominance of various shapes—the cave which inspired, eventually, the dome; the teepee or tent, which inspired the classical shape of the temple with its triangular pediment and series of columns.

The stacking, layering and interplay of shapes is at the base of architecture. Simple forms compose more complex ones; the cylinder, flared out at the bottom and tapered, becomes the shaft; a rectangle designed, perhaps indented and ornamented becomes a molding, a block becomes a plinth or a pedestal. Toward this

elemental understanding of architecture, students will be guided in the use of a “kit of parts”, composed of cardboard forms and/or wooden elements.

(figure available in print form)

From the condensed perspective of historical hindsight, we are able to analyze the flow of architecture. Indeed, the history of architecture blends with the architecture of history. It is important, then, to appreciate an overview, not only of the evolution of basic shapes and spaces, but they way they were imposed upon by five key elements. These include:

1. Needs. Why do people need buildings? What were man s earliest structures and how did they evolve? What are the physical, psychological, spiritual and other needs of a building?
2. Technology. How is a building is built? How is a building affected by the environment? How do new tools and new construction techniques (ex. the Roman arch) affect the prevailing architecture thought?
3. Culture. What is the symbolic language of architecture? What are the rituals, signs, symbols and other elements that compose the language of architecture?
4. Climate. How does the building deals with nature? What types of buildings and details are suited for each type of culture (example, a pitched roof for a snowy region, light colored walls and small windows in hot dry areas)?

We will also explore the periods of architecture, following the somewhat superficial but nevertheless intriguingly capsulized format suggested in *Architecture for Beginners*.

While a brief overview will be given taking into account such cultures as Early Civilization 5000 BC-4 AD, ancient Egypt (including the building of the pyramids), and others, the focus will be on Greek, Roman, Gothic and Victorian architecture.

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Particular attention will be given to the colonnade along with the evolution of the three Greek orders of columns.

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1. Doric Order. This is similar to the Tuscan order, but not as stubby. It is thought of as “male” architecture—strong, firm and almost military in connotation. One feature of a Doric column is the inclusion of a triglyph (a vertical element with two half-channels) in the frieze (the middle part of the entablature). It also has a square block on the underside of the corona (a part of the cornice) and conical pieces below the triglyphs. Unlike the elaborate Corinthian design, the capital is simple—just a sort of square slab supported by a molding(s).
2. Ionic Order. This order is evidenced by a voluted capital (a capital in the shape of a whirl or spiral) and has small closely-placed blocks on the cornice.
3. Corinthian Order. The capital is perhaps its most striking feature, depicting a “peeled back”

look, or the unfurling of leaves.

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The Romans borrowed heavily from the Greeks, inflating their ideas into Roman architecture, building fortress-like buildings with emphatic fronts and showcasing their invention, the arch. The civil and military architecture of Rome took the five orders (the Doric, Ionic and Corinthian plus Tuscan and Composite) which they perceived as the essence of architecture and wedded them to elaborate configurations of arches and vaulted multi-story buildings. The orders became not only ornament but, as actual controls which made the building speak. They became, in a way, ceremonies, celebrations of structure and expression of the most integrated sort.

The Romans did not discard the Greek post-and-lintel construction system (trabeation) but rather relegated it to the realm of expression, as shown in the Coliseum at Rome, where there are three open galleries of arches with an additional solid story on top. The colonnades, points out Summerson, have little or no structural purpose, but serve as representations of temple architecture.

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Gothic architecture was developed in Paris, in the Ile de France, in the 11th and 12th centuries, emerging from Romanesque and Byzantine forms. It served as the architectural style of the High Middle Ages in Western Europe, and examples of from the Gothic revival movement are abundant on the Yale campus. Gothic exists as a marriage of humanity, God and nature. The Gothic system exploited several new elements, the pointed arch, the flying buttress (a sort of bridge to carry the roofing system) and the ribbed vault. It was also typified by the gradual reduction of the walls to a system of highly decorated fenestration. Notre Dame in Paris is one example of Gothic architecture. Gothic tracery is an interesting element. Children might imagine this easily by speaking about paper cut-outs placed over a window. Tracery consists of curvilinear openwork shapes of stone or wood that create a pattern within the upper part of the window. There are many styles of tracery including bar tracery, a pattern formed by interlocking bars of stone, and fish bladder tracery, a late Gothic tracery reminiscent of the air-bladder of a fish.

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At least a cursory discussion of Victorian architecture would be well worth the effort. This mixture of ornamentation and construction certainly fires the imagination. It is an accessible architecture with a profusion of examples available locally. A look at Victorian architecture helps us also bring our focus on the civil, military and ecclesiastical structures into the realm of the everyday, or, in other words the “domestic cottage.” While grand and imposing houses were erected for the aristocracy, the revolutionary stride of this era was the housing style of the middle class which began to accumulate character. Homes of the Victorian style, named after Queen Victoria who reigned for 63 years, went beyond the useful.

It is necessary of course that a structure must be useful. The building with holes in its roof simply will not do

when the inhabitants are subjected to the forces of nature. The beautiful, on the other hand, is somewhat less obligatory, as evidenced by box-like structures and slabs of concrete shaped somewhat irreverently in the form of a house. The beautiful, thus, is something apart from the useful, although most people do yearn and express their yearnings for something that manifests the beautiful. Thus, the simple box shape of a house is enhanced by ornamentation, by a colonnade/porch, by a portico, turret, tower or other feature. Beauty is increased when proportion, symmetry, variety, harmony and unity are well executed. Victorian Architecture is perhaps so intriguing because of its innate sense of eclecticism. After Queen Victoria constructed her new home on the Isle of Wight (Osborne House, constructed between 1845 and 1851) with Italianate features, scaled-down versions began to appear on the exteriors of middle-class villas. Features began to be mixed indiscriminately and much more of it was used. Various styles of Victorian architecture developed—the High Victorian Gothic, the High Victorian Italianate, the Second Empire Style, the Stick Style, the Queen Ann Style, and so forth. The Victorian period had the cumulative affect as heaping ornamentation not only onto the mass of the building but onto the masses.

While our review of architecture for the schoolchild must be superficial by nature, the perspective gleaned will allow the youngster to have at least a working appreciation and knowledge of architectural styles along with some terms. A few terms of architecture's vast vocabulary follows: abacus, arch, arcade, bracket, cornice, entablature, gargoyle, and frieze.

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But our perspective is to be more than historical. An appreciation of design will be sought through the development of a hands-on and eyes-on experience, whereby students come to grasp at least the basics of shape and space. First we will discuss the solid elements of architecture, which, when composed with others of their kind or other kinds, create spaces that can be every bit as exciting as the forms themselves. These solids include: columns (post), beams (entablature), walls, roofs, platforms (foundation level), arches, rafters, and joist. They also include details such as capitals, cornices, keystones, moldings, pediments, and friezes. Through the combination of solids, voids or spaces are created, such as windows, doorways, intercolumnation, cortiles, forecourts, courtyards, atriums and hallways.

Students will be guided in developing an understanding of how buildings come together through the clever placement of architectural element such as columns. The most basic building is perhaps the aedicule, a simple four poster building capped with an entablature and pediment. This can also be referred to as a pavilion, gazebo or bandstand. This design can be expanded to create the Classical Greek temple.

The placement of shafts or columns covered with a flat roof creates a pergola (covered walkways.) The basic house is created using solid elements of walls and roofs, with spatial elements of doorways and windows. A simple porch can be added with the use of two columns, entablature and pediment. Towers and wings can be created to add visual and spatial complexity as variations on a theme.

The spaces between the columns is an extremely important aspect of architecture. They can create as much visual excitement as the columns do themselves. Intercolumniation (the spacing of columns) not only helps

set the tempo, but quite often at the very least influences the mood of the building. What then, beyond these simple components, are the basics of architecture? In the *Classical Language of Architecture*, author John Summerson spoke of the importance Romans placed on the importance of the spacing of the columns measured in diameters, what he likened to beating time. Summerson further developed the analogy of musical terminology to express the styles. For the most common Systyle (2D) and Eustyle (2 1/2D), he respectively related to “allegro” and “adagio”, or to a quick march and a dignified walk. The closest spacing of Pycnostyle (1 1/2D) was referred to as a “halt” and Diastyle, the wider Diastyle (3D) was equated to the musical term “adagio”. The widest style of intercolumniation Araeostyle (4D) was expressed as a slow leaping motion, although he was quite reluctant to equate it with “largo.”

Summerson goes on to point to differences of emotions aroused between S. Pietro in Montorio, Rome by Bramante in Diastyle (3 diameters)—stately, serene, meditative—and the mausoleum by Hawksmoor at Castle Howard—Pycnostyle (1 1/2 diameters—tense and forbidding.

The study of columns will be expanded to understand the various types.

1. Columns in the round. These carry something, typically their own entablature, but also possibly a wall or the eaves of the roof above it. A continuous colonnade surrounding a temple or court is called a peristyle.
2. Detached columns. These have a wall behind them which they do not touch but into which their entablature is solidly built.
3. Three-quarter columns. One quarter of these columns are built into the wall.
4. Half columns. These columns are half-buried in the wall.
5. Pilasters. These are not necessary structural items, but rather decorative ones, where the columns are “carved” as if in relief on the wall.

Free-Standing Architectural-Inspired Monologue

This follows the same basic rules of monologue writing. Now, however, students will be asked to write monologue inspired by an architectural element. They will, for this exercise, rely on a place visited, referring to “critique sheets” or use as inspiration their three dimensional model, or, selecting from pattern books, draw an architectural element for the basis of their monologue.

Guidelines:

Look at your selected object and ask yourself the following questions.

1. Does it give the feeling of heaviness or lightness?

2. What emotion does it first evoke?
3. What emotion does it evoke after you look at it for a while?
4. If a person had to live inside of the structure, what would he/she be like?
5. If a person had to live outside of the structure, what would he/she be like?

Cluster-write about your building or architectural element.

(In this technique, a word is put in the center of the page and circled. Using this as the radius, a “map” is drawn with subsidiary circles each containing a word. Every time the particular tangent of thought is exhausted, the student goes back to the center word and continues another “line” of brainstorming.)

Free-write a story about your building or architectural element.

(In this technique the following procedure is utilized.

1. Students are given a pen and a piece of paper and given the instructions.
2. They are told when the teacher starts the exercise they must write anything they can on their building, but they must not stop writing at any points.
3. They cannot take their pen off the paper, go back and re-read what they wrote, cross out or otherwise edit.
4. They must not worry about grammar, punctuation, changing thoughts, or otherwise editing themselves.)

These exercises are designed to get students working from the right side of their brain.

Students must then write a monologue to be acted by a character who would live either inside or outside of their building

Character Sheet

NAME:

HOMETOWN:

AGE:

PHYSICAL DESCRIPTION:

PARENTS (AND BACKGROUNDS, SUCH AS PROFESSIONS)

MOTHER:

FATHER:

SISTER(S) :

BROTHER(S) :

WIFE:

CHILDREN:

1.

2.

3.

4.

PROFESSION :

HOBBIES :

WHAT DOES YOUR CHARACTER LIKE TO DO BEST?

WHAT DOES YOUR CHARACTER DO WHEN HE/SHE GETS ANGRY?

HAPPY?

NERVOUS?

WHO IS YOUR CHARACTER'S BEST FRIEND? WHY DOES HE/SHE LIKE THIS PERSON?

WHAT ONE THING DOES YOUR CHARACTER WANT TO DO THAT HE/SHE NEVER GOT A CHANCE TO DO?

WHAT KIND OF PLACE DOES YOUR CHARACTER FEEL MOST COMFORTABLE IN?

DESCRIBE THE PLACE WHERE HE/SHE LIVES:

WORKS:

WHAT IS YOUR CHARACTER'S MAIN PROBLEM:

HOW DOES HE/SHE SOLVE IT?.

THEATER GAMES

Through the use of theater games, students can expand their learning of architecture by reinforcing imagery through an additional medium. In each of the exercises, students will be asked to use their architectural three-dimension models or flat patterns as inspiration. In some cases, the students may actually make larger drawings on brown paper, using a grid system to transfer the pattern.

Through theater games, students will:

1. Develop improvisational skills
2. Respond on the intuitive level
3. Enhance powers of observation
4. Expand their creativity
5. Allow for a visual link between the two mediums.

A number of theater games can be utilized. These include:

Living sculptures. The first student strikes a pose and each additional student must add on, touching former student, to create a living structure, conscious of the placement of limbs, torso and head. Remaining students analyze living sculpture in terms of line, form, texture, shape, solid and space. Students will then use their bodies to create shapes that represent elements of a village—a church, town hall, bridge, etc. (Example, two people can curve and link together to create a bridge.)

Human columns. Students will be assigned either a Doric, Corinthian or Ionic column. They will first be asked to walk in the manner of the column, wear appropriate expression and “jockey for position” with other types columns for various buildings, explaining why they are best suited for the job at such facilities as banks, prisons, offices, etc.

Neutral Party. Students act in pairs with the first maintaining a neutral posture. The second student enters the “room” designed by each student and starts a dialogue appropriate to the setting at which point the neutral person enters the improvisation. References must be made to the building or component as a setting which actually becomes like a third character. For example, if the student’s architectural component is a doorway, who may or may not have entered the door previously might be a part of the dialogue. Eventually the “neutral” party must find a logical reason to “leave” the scene and another person enters with the second student now assuming the neutral posture.

WRITING PLAYS

As a final project, students will be required to write a play using their model or architectural pattern as a backdrop. A number of possibilities might be possible for translating their architectural work into backdrops. These include but are not limited to:

1. Taking a photograph of an existing building and then using that as a backdrop. The student would then write a play to be, for example, "set on the steps of Woolsey Hall."
2. Selecting a pattern or a combination of patterns from a pattern book, designing the set in miniature on either an abstract basis or incorporated as an vital component in another structure such as a wall or doorway.
3. Using one or more design components for the suggestion of a backdrop, such as a series of columns with specific placements, a window, a fireplace.
4. A complete building design based on various architectural components .

Once the backdrop has been selected, students will now write and five to ten page play. The following guidelines will be used.

1. Select two or more characters for your play. Fill out character sheets for each one (attached.)
2. Write a plot line. What s going to happen in the story. Make sure that there is a problem which occurs and that it is at least partially solved.
3. Think about how the setting influences the action.
4. Remember the action is defined by the set to a large degree. Make sure that all the action relates to the backdrop. Describe your setting first in words.
5. Make sure to put in stage directions.

Students will then write a play and be given feedback and required to write at least two drafts. The best plays will be selected and then acted by the class.

BIBLIOGRAPHY

For teachers:

John Summerson, *The Classical Language of Architecture*, MIT Press, Cambridge, Massachusetts, 1963. This book provides an excellent overview of the origin and significance of the orders as well as a birds-eye view of architecture.

Alexander Jackson Downing, *The Architecture of Country Houses*, Dover Publications, 1969. This book, by America's first important landscape architect, provides a thorough discussion of many aspects of the early Victorian House.

Elizabeth Mills Brawn, *New Haven: A Guide to Architecture and Urban Design*, Yale University Press, New Haven, 1976. This book allows you to construct your own walking-tour of New Haven.

Louis Hellman, *Architecture for Beginners* Writers & Readers in association with Unwin Paperbacks, London, 1986. This book encapsulates key concepts of architecture and is illustrated by imaginative drawings.

Cyril M. Harris, editor, *Illustrated Dictionary of Historic Architecture*, Dover Publications, Inc., New York, 1977. This book gives practical definitions of various elements of architecture, enhanced by over 2000 line drawings.

For students:

Diane Maddex, drawings by Roxie Munro, *Architects make Zigzags: Looking at Architecture from A to Z*, published by the National Trust for Historic Preservation, The Preservation Press, Washington D.C., 1986. This is a fun alphabet-style book that will acquaint students with some basic architectural concepts.

David Eisen, *Fun With Architecture*, published by the Metropolitan Museum of Art and Viking Press, New York, 1992. This "kit" includes rubber stamps for students to make designs, and a small book that introduces concepts and styles.

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