Liz Swanson is an award-winning architect, designer, and artist. She is an associate professor of architecture at the University of Kentucky. Her research focuses on the relationship between landscape and identity. She currently directs the first-year program for beginning design students. Immediately after Hurricane Katrina, Swanson and her husband Mike McKay, a native of New Orleans, worked with their students in New Orleans helping to rebuild and redesign areas of the city. This essay, written especially for this edition of The World Is A Text, is an introduction to reading architecture.

THINK BACK TO A PLACE YOU LOVED AS A CHILD—a favorite spot where you instinctively felt free or safe, excited, or at ease. Now think of the physical characteristics of that place: was it open or enclosed? Dark or bright? How did you get there and what was the view once you arrived? For me, this place existed under the sagging canopy of a willow tree. Its droopy branches formed a shady circle of dappled light within which I could hide, barely visible to others through the dense screen of its leaves. While not literally a building, my experience of this space was nonetheless architectural: it was a cozy room, just my size, with windows and skylights that shifted in the breeze.

As children, we seek out places that inspire our imagination and in doing so begin to understand the connection between architecture and experience. Like landscapes, buildings guide how we use and move through space; we see and feel the impact of the physical world long before we have the vocabulary to describe it. This understanding evolves as we grow to include more sophisticated aspects of meaning, such as culturally specific associations and learned behaviors that further affect how we occupy any area. Consciously or not, each time we interpret the possibilities of a place, we engage in an ongoing dialogue with our surroundings.

But perhaps because buildings are everywhere and this dialogue so constant, it is easy to overlook the specificity of how our surroundings frame and inform our activities. Indeed, the entirety of the built environment may be read as series of semiotic patterns that reveal the intricacies of human relationships. Take a stroll down the main street of your hometown, and ask: what do the buildings say about my community? How does the architecture guide my actions? In answering these questions, we begin to read the physical environment as something that shapes social interaction.

Likewise, we begin to understand the impact of architectural design: that the places we inhabit are planned on purpose, the result of an architect's desire to express a specific intention. Just as an author of a great novel carefully plans the way a plot will develop and how each of the characters will contribute to the overall story, architects plan how buildings and landscapes contribute to the overall quality and identity of a place. For example, Washington D.C. was planned specifically to communicate the ideals of our nation, and therefore many of the buildings are designed using monumental styles that symbolize democracy. Additionally, the city streets are organized to orient travel toward significant landmarks, such as the White House, while zoning stipulates that no structure can be built taller than the Capitol. In contrast, the stylistic diversity of Chicago's soaring skyline and the unrelenting grid of its city streets can be read as a result of the city's position as a hub...
Fig. 1 This streetscape, for example, is clearly a constructed text. If we were to read it, we might begin with the "message" the environment tries to convey. How do we use these spaces, and how are we supposed to feel here? In what kind of place might such a scene exist? How can you tell? Notice the details: the doggie dish, the planted divider, the detail of the fleur de lys on the building—when taken together, what do they suggest?

of industry and architectural innovation, a quality that Chicagoans claim as a source of pride. The physical characteristics of the city—as with all places—indicate not only how it functions, but part of the identity of its inhabitants.

In this essay, we will unpack and explore a few of the fundamental elements of architecture—space, form, and material—to examine the various ways these can be used to create specific experiences, and therefore, meaning. Throughout, we will focus on the relationship between the action and consequence of design: we will read how places are made in order to draw some conclusions as to why.

**Space**

**Defining space**

When thinking of "space," one might imagine something similar to the outer limits of the atmosphere: an infinite and unbounded expanse of air in which tangible objects are located. The architect, however, conceives of space differently. When designing anything—from a large park to single room—the architect's job is to consider the shape of the space between things, the void in which people dwell.

Is the space large and voluminous, like a grand auditorium? Is it tight and narrow, like a back alley or secret hiding place? Is a room small or big, and how does this make one feel? When we start to pay attention to the proportion, distance, and degree of enclosure between the solid stuff (floors, walls, ceilings, etc.), we can begin to read
Fig. 2 Whether designing a single room or an entire community, the architect's job is to design the space that exists between things. The objects in this diagram can be read at any scale—as four separate buildings or as four building components, such as walls, roof, etc.—as the principle remains the same.

1. Objects located randomly, with little relationship to each other. The space between them is 'left-over,' i.e., not specifically considered.

2. The same objects, this time designed in relationship to each other, with edges and center-points that align.

3. This alignment results in the creation of specific spaces that are perceived as strongly as the objects themselves.

space as something that’s sculpted to create specific sensations. For example, a survey of residential design from the past century reveals a change in family values, and consequently, a shift in how we experience space. Homes built in the 1900s included formal dining rooms, kitchens, and public parlors that were designed to separate and compartmentalize activities according to gender and privacy. Each room had a distinct purpose, and therefore a distinct boundary of enclosure that cued inhabitants on how the room was to be occupied. By contrast, many contemporary homes remove these boundaries altogether, featuring bar-seating within kitchens that open to family rooms and dens that are used for all types of gathering, thus encouraging a greater sense of informal communality.

**Space can be read as a sign; interpretation depends on cultural knowledge**

Unlike conventional signs and symbols, the impact of space is not visual as much as it is physical. We perceive space with our bodies, using all five senses. A closed door prohibits passage; our voices echo when speaking in a cavernous room. These are physical facts that do not require any architectural training to understand; however the way we interpret these facts depends on our cultural knowledge of what such qualities might mean. A young child might enter a movie theater and continue to talk loudly, but those who understand the function of this room know why the space is large and the lights are low, and respond accordingly. Hence, when evaluating the purpose and meaning of any place, it is important to ask: how much of my interpretation stems from the actual physical design of the space itself? How much is influenced by my individual lens of perception, i.e., my personal experience, education, and cultural background?
Interpretation of space is relative, depends on context
Our interpretation of a space is also relative: we read its impact in relationship to what surrounds it. For example, if you have ever traveled within a major metropolis you know that the width of a city street seems increasingly more constricted as the height of the buildings grow on each side; the street has not changed, but the proportion of the space has. In this way, our perception of space shifts as we move through it as a series of experiences that unfold over time, a phenomenon that architects use to accentuate the impact of design. For instance, the towering volume within a cathedral, and in turn, its spiritual resonance, is exaggerated by the contrast of the low ceilings of the entry vestibule that precedes it. By taking us through a relatively compressed space first, the sensation of openness (and perhaps awe) is emphasized. Like a well-written story, we experience architecture as a sequence of related events.

Form
Definition of form
Yet, we can also read buildings as objects. In fact doing so might be the most common way people perceive buildings. What does a building look like? What shape does it take, and what might we read from its appearance? Take, for instance, a long, linear structure with few windows, smoke stacks and a series of loading docks; what might it suggest that a small building with two stories, a bay window, and front porch does not? Indeed, almost as a matter of habit, we regularly encounter buildings and draw conclusions about their function or message, often without ever experiencing the spaces within. A large building with arches, a spire and walls predominated by stain-glass windows, for instance, tends to communicate "church" because these elements have come to identify that type of building—even if the interior space has been appropriated for another use. For better or worse, one of the most accessible aspects of architecture and our reading of its meaning relies heavily on what we can see: the solid stuff, or what architects refer to as form: the shape, size, orientation, and visual movement of a building as a figure in space.

Form can be read as a sign; interpretation depends on cultural knowledge
Whether looking at the shape of a doorknob or the contour of an entire landscape, we can begin to read form as the result of two related considerations: the function it must perform and the message the designer wishes to convey. For example: in practical terms, columns allow a building to stand while simultaneously allowing for passage. But ornately carved, classical columns communicate an association with Greek or Roman ideals, while sleek, slender columns that move asymmetrically across the building's exterior may speak of a more contemporary fascination with pure, visual rhythm. 

Similarly, steel beams may be necessary to carry the massive load of a building's weight, but the choice to expose them as a prominent design feature expresses them as a value.

Consequently, all built form may be read as a sign of some kind. A pharmacy shaped like a mortar-and-pestle is a symbol that indicates the building purpose; a large big box store that camouflages its nature as a one-stop shop by decorating its exterior like Main Street U.S.A. is a sign of the company's desire to project the image of a personable community (Fig. 5).
The shape and visual movement of building elements can convey different messages.

1. Columns with Classical decorative carving, spaced at regular intervals convey an association with Greek or Roman ideals.

2. Columns with no ornamentation, spaced asymmetrically, may convey a more current architectural interest relating to contemporary culture.

3. Here, a wall system that doesn't use columns at all. What might this design communicate?

A Gothic cathedral, the Eiffel Tower, and Pompidou Center in France are all examples of buildings whose forms emphasize a reading of structure. Each was considered “cutting edge” in its day, using the most innovative materials and construction techniques available at the time, allowing the architect to achieve new heights and forms. Rather than hide the structure, a choice was made to expose and highlight its prominence (with color and light), expressing it as a value.
Think of the definition of form: the shape, size, orientation, and visual movement of a building. What makes the tower in the middle of this skyline unique from its surroundings? What makes it similar to its surroundings?

Still, other forms may be signs of the times. Buildings that use innovative or more abstract shapes that do not rely on recognizable images from the past are examples of how architects design as a way of speaking about contemporary culture. The design of a curvilinear skyscraper with undulating surfaces, for example, may be the result of the architect's search for environmentally-sensitive forms: shapes that maximize ventilation and natural light, and minimize the threat to migrating birds who cannot perceive the depth of traditionally-designed rectilinear towers with flat facades.

The design of Frank Lloyd Wright's famous house, Falling Water, features stone walls that resemble the surrounding terrain and cantilevered, horizontal roof planes that relate to the lines of the existing landscape. The building typifies Wright's attempt to create a new American architecture based on indigenous materials and free-flowing spaces that integrate with nature. The form of the building moves asymmetrically across the site to create a visual rhythm of shifting elements, connoting the organic topography and tectonics of the earth.

Interpretation of form is relative; it depends on context

This brings up yet another consideration of form: how it responds to context. For instance, the example outlined in Figure 6 can be read in one of two ways: separate from its setting (because it is curvilinear); or particularly site-specific (inspired by the local climate and ecology). The important thing is that we recognize that all forms can be read in terms of the dialogue they create with their surroundings—a conversation that goes well beyond looks. Size, height, and distance from the street, for example, all contribute to how buildings either blend in or distinguish themselves from their environment. A residence that mimics the ornamental style of adjacent historic homes but dwarfs them in terms of size may be less contextual than a modern design that carefully considers the scale of the neighborhood.
Conversely, other forms may be designed specifically to contrast their surroundings in order to achieve a goal, such as increasing tourism by creating a unique, modern icon within an otherwise traditional setting.

**Material**

**Definition of material**

Of course, one's understanding of space and form would not be complete without a corresponding conversation about materials. After all, as children we learn early on that different materials have distinct strengths and capacities. The fable of the Three Little Pigs teaches us that unlike straw and sticks, a house made of bricks can withstand even the strongest winds. Similarly, we understand immediately that a room devoid of windows and light has an entirely different effect on one's psyche than one enclosed with lots of glass. Materials—meaning the actual physical matter that comprises individual building components—affect the qualities of a place as well as one's perception, and therefore our sense of what any architectural design might mean.

**Material can be read as a sign; interpretation depends on cultural knowledge**

Take, for instance, the various messages embodied within the simple construction of a fence. Spatially, its purpose is to divide while formally it acts like a wall: a long, thin vertical plane that marks the length of a boundary. But now imagine the divergent messages communicated by the choice of chain-link fence topped with barbed wire versus one made...
While the house on the right shares the same kind of traditional details as other houses on the block, its height and size is out of scale with the neighborhood.

In contrast, the scale of the white 'modern' house seen here is in keeping with its neighbors.

Which house do you think fits its context more appropriately?

of wooden white pickets. What does the one say that the other does not? While both effectively delineate territory, the meaning of the message varies—in part because of their contrasting physical characteristics (barbed wire causes pain) but also because of the cultural associations attached to each.

Indeed, the power of cultural associations can influence the development of entire communities and thus reveal our position within the world (Figure 10). While one subdivision may consider vinyl siding a convenient, durable material that is easy to clean, another may eschew it as tacky and cheap, prohibiting its use altogether. In other places, the legacy of a material's use—once chosen for its physical properties—can come to signify the character and identity of its inhabitants. Modern technology makes it possible for any building to exist in Santa Fe, but residents have codified the use of adobe for its long-standing historic and cultural significance.

Conversely, in contemporary architecture, materials may be chosen specifically for their ability to communicate outside of conventionally established connotations—again, a sign of the times. An architect might choose a raw material for its intrinsic properties, but...
Fig. 9  Symbolism in names and material choices

1. The entrance gate to Equestrian View, a neighborhood in Lexington, Kentucky that seeks to reinforce its connection to the region: by choosing the name “Equestrian View” (Lexington is known as the ‘Horse Capital of the World’); and by choosing stone as its material (Lexington has a rich collection of stone walls throughout its countryside).

2. The entrance gate to Tuscany, another neighborhood in Lexington, Kentucky that seeks to distance itself from the region: by choosing the name “Tuscany,” a region in Northern, Italy; and by choosing Venetian plaster as its material (a finish associated with old Europe and not common to Kentucky).

What might the designers of these two communities be trying to communicate by these name and material choices?

What connotations might a prospective buyer associate with each?

work with it in a way that expressly resists any kind of symbolic meaning, instead opting to highlight the phenomenal qualities—i.e., the patterns, light, and sensory affects—that the material offers. For example, wood might be chosen because the rhythmic pattern of its grain enlivens the reading of a surface or its capacity to be milled in standard lengths increases the efficiency of construction. The material itself does not represent or symbolize anything; it simply is what it is, a visual affect or tectonic quality indicative of current architectural interests.

Liz Swanson • Architecture, Experience and Meaning
Fig. 10  Pictured here are two very different single-family homes. What does the material choice of each one communicate? What might you read from the design of the space or form of each building? Where, when and for whom do you think these homes were built?

Fig. 11  Many buildings are designed with concepts that are not symbolic. In these buildings, materials are not chosen for their connotations, but for their capacities and sensorial affects.
1. Surface patterns: Some materials, such as this marble, are chosen for their ability to enliven a surface via patterns and color.
2. Adaptability; light qualities: Some materials, such as this sheet aluminum, are chosen for their adaptability (easily manipulated) or their reflective qualities.
3. Efficiency: Some materials, such as wood and steel, are chosen for their capacity to be milled, fabricated, or constructed with high degrees of efficiency.

Conclusion
This brings us finally to an important point when reading the built environment. Architecture, like literature, the arts and so many things, ultimately exists as a reflection of its time (Figure 12). We can take the pulse of a society by examining the qualities and concepts of its places, which over time create a rich palimpsest that locates our position in history. Symbol or not, every building is a sign. Their form, space, and materials—in conversation with numerous other elements of architecture, such as scale, light, and accessibility—are the result of an architect’s desire, the inhabitant’s values, or even a lack of intention at all, all of which reflect the interests and concerns of a specific era. Collectively, we can read buildings as texts and ask: what do the buildings of our towns and cities say about us? And what are we saying to each other through the kinds of places we build? For one of the greatest strengths of architecture remains its ability to inspire greater consciousness: of who we are, and who we wish to be.