ARCHITECTURAL SIGN LANGUAGE | ARCHITECTURE AS A LANGUAGE COMMUNICATED THROUGH SIGNS

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CONTENT

ABSTRACT

American Sign Language (ASL) is not transparent; one cannot understand it until one learns it. It takes many years of study and interactions with people who use it daily to be able to properly learn the language. The same can be said about architecture and the communicated language of the built environment. Architecture, like ASL, uses non-verbal communication; it tells a story through specific elements and gestures. However, when one element or gesture is compromised, the others must still communicate the same story to offer everyone a unique experience. Communication is a vital part of design and our everyday lives as we interact with the built environment. How effective is architecture as a sign language when compared to American Sign Language used in deaf and heard-of-hearing communication?

WHAT IS LANGUAGE?

Language is the composition of carefully selected components. Components including lexicons, grammar, phonetics, syntax, and semantics. Each element is applied in combination to create a language. Figure 1 below visually outlines the various subfields of linguistics and the study of language.

Definition of *language* (n): the words, pronunciation, and the methods of combining used and understood by a community. Language shapes and influences our social interactions.

Grammar is almost as important as the language itself. *Grammar* is the language rules used to compose sentences and phrases, the study of words and their inflections, functions and relations in the sentence or phrase.

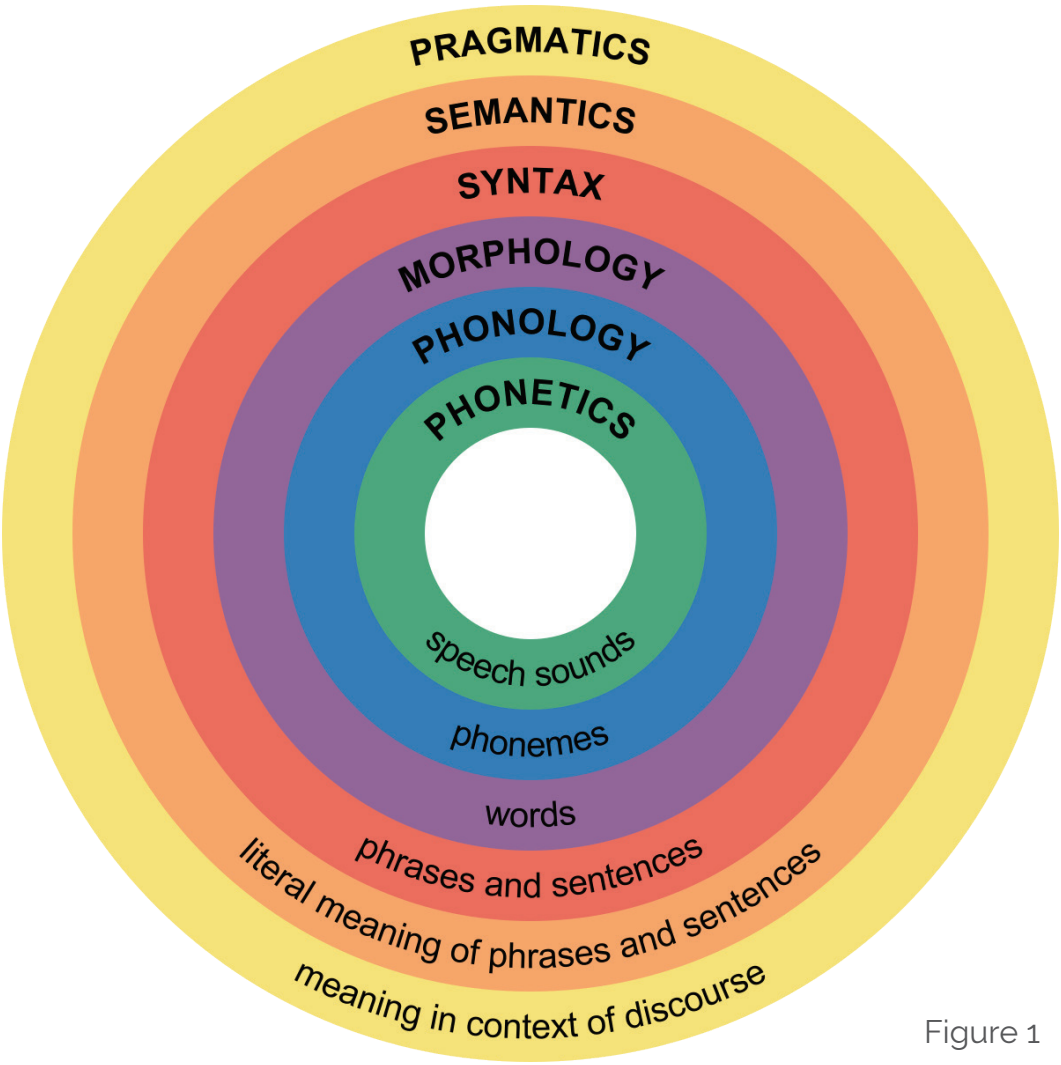


Figure 1

Linguistic Elements

Definition of *lexicon* (n): the language framework, the sum of words in the language by using grammatical rules to combine words into logical sentences

> Example: run (uninflected word); running, ran, runner, (forms of inflicted word)

Definition of *phonetics* (n): the study of individual speech sounds. Phonemes are the sounds that are made when a word is said. The English language has approximately 45 different phonemes via letters and letter combinations.

> Example: bake | brake; adding one additional letter changes the sounds and meaning of the word

Definition of *morphology* (n): the study of words and the system of word-forming elements. Morphemes are the series of sounds (phonemes) that are used to create a special meaning (word).

> *Bound morphemes*: adding a prefix- or -suffix to a word [ex. Unkind | Kindly]

> *Derivational morphemes*: the process from changing a description to an action [ex. Sad | Sadness]

> *Inflectional morpheme:* modifying the tense of the verb or number value of a noun. [ex. Bottle | Bottles]

Definition of *syntax* (n): the study of sentence and phrases; the construction of words together to form effective models of communication; the combination of morphemes and grammar. The order of words in a sentence is more crucial in the English language versus other languages, such as French or American Sign Language that focus of the emphasis of the word to convey the meaning of the sentence.

> Example 1: Sara picked up the can.

> Example 2: The can picked up Sara.

Definition of *semantics* (n): focuses on the meaning of a sentence; similar to pragmatics, how the context of the sentence contributes to the meaning that is intended to be communicated.

> Example: "Hi Jack!" The *context* of this example changes from a surprised greeting to a friend versus an international plane ride between countries.

> Example: AWESOME! | awesome

The second work is perceived to have a less energetic connotation, more sarcastic tone, and the body language in the delivery of the second word could reveal disapproval or disappointment.

WHAT IS A SIGN?

Linguistics is part of the general science of semiology. *Semiotics/semiology* is the study of signs, their functions and effects. It has been discovered that semiology is applicable to language and the approach to media theory.

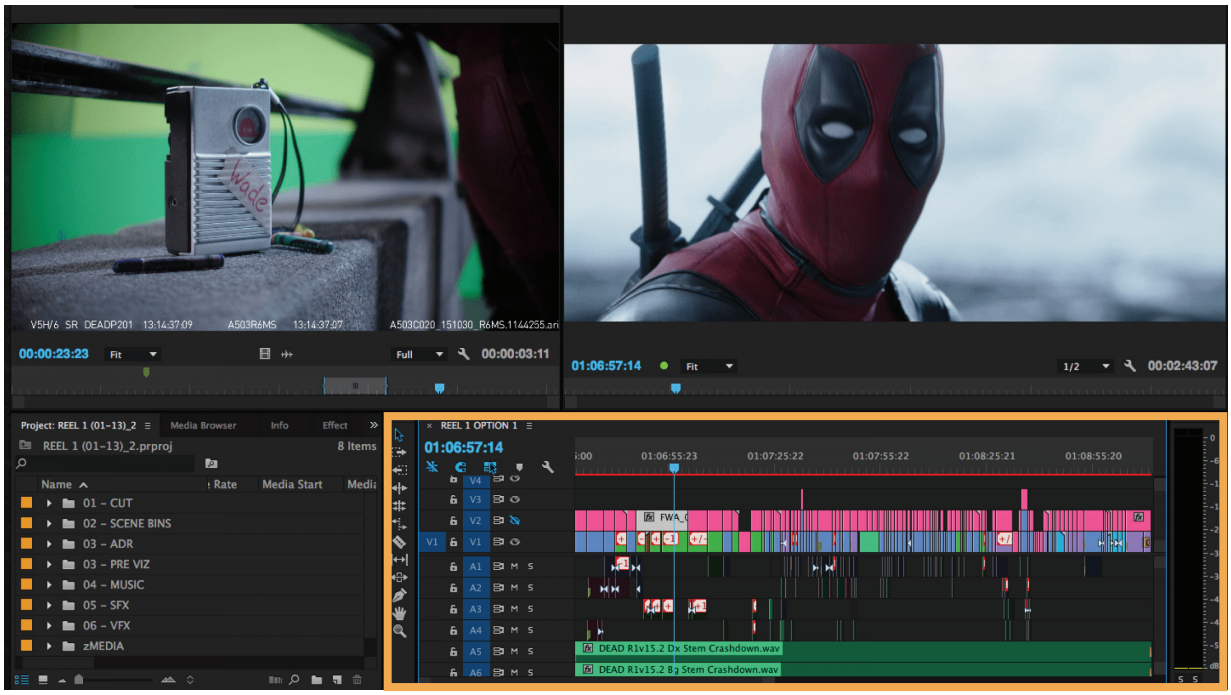
When understanding the basics of semiotics, it is important to know the difference between a signifier and the signified.

Signifier – the sensed image
Signified – conception one has when seeing the sensed image

Example: The written word 'car' acts as the sign. The letters 'c-a-r' represent the signifier and the category 'car' is the signified concept because there are many automotive makes and models that can be classified within the 'car' category.

The History of the Saussurean Branch of a sign is composed of a 2-part dyadic system. This 2-part dyadic system is organized into codes, *paradigms* and *syntagms*. Both codes are structures as part of the semiotic analysis that is most often presented as axes in a dimension within the analysis, where the paradigmatic axis is vertical, and the syntagmatic axis is the horizontal.

The *paradigm* is a set of associated signs which are all members of some defining category, but each sign carries its own significance. The way a shot changes in the example of a film is a paradigm. The medium is displayed through a specific media text that the signifier remains the same though the sign itself is altered. Changing the medium of the paradigm is used as the transition between shots, the execution of the shot, examples such as cut, fade, or dissolve.



PARADIGM

Figure 2

The *syntagm* is the second component of the 2-part dyadic system. This code is known as the combination of interacting signs that form a meaningful chain. These combinations or links are made within the framework of rules and conventions. Sentences in a language contains words and those words are the syntagms. In a visual media, photographs possess a spatial relationship displayed within the image, this relationship is referred to as the syntagm. Similarly, in American Sign Language, when telling a story or discussing place, the signer uses their body position to show each person in the story or to show the spatial relationship and connection between objects. Setting up where you are, where you've been, and where you're going are all situations that possess the concept of spatial relationships. Theses spatial relationships are how deaf people understand the context of the conversation in ASL.

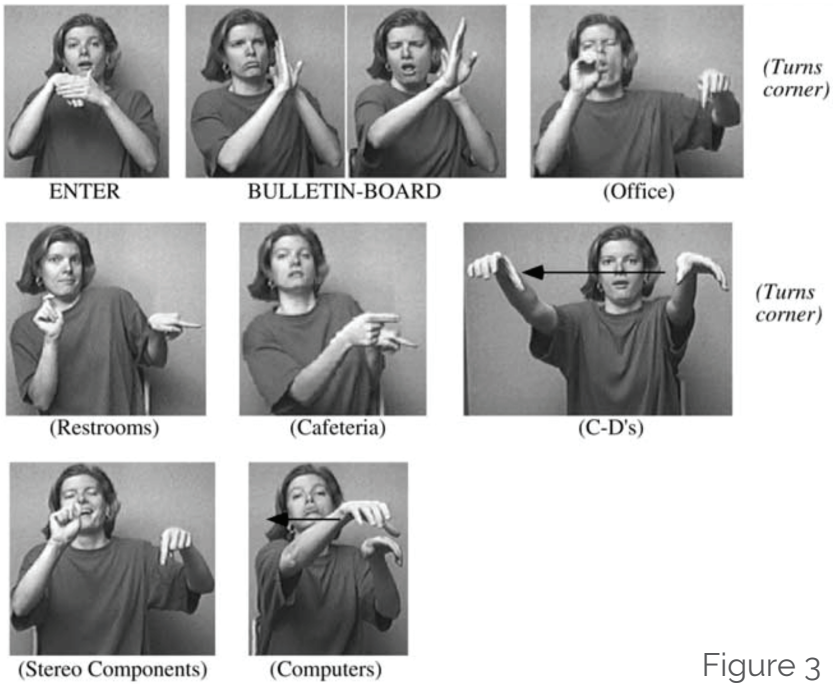


Figure 3

Semiology is a combination of these 2 dyadic systems. It is broken down into different branches of studies then applied to semiology and the visual arts as a code-based system that is further broken into 2 categories referred to as social and semiotic codes.

Social codes consist of verbal language, bodily codes, commodity codes, behavioral codes, and regulatory codes. Semiotic codes vary in complexity of construction by means of the first and second level of articulation.

The *level of first articulation* is the smallest meaningful unit available such as a morpheme or the words in a language, they consist of the signifier and the signified. The signifier and the signified are part of the fundamentals of semiotics, the signifier is the sense image whereas the signified is the concept one has when seeing the sensed image. The *level of second articulation* is divisible into minimal functional units that lack meaning. This is the equivalent to phonemes in speech or the

sounds that are produced when talking. These phonemes do not possess meaning unless combined with the first level of articulation which has the outcome of a meaningful sign. The levels of articulation are combined with the denotation and connotation of a signs to produce sign meaning.

Each articulation has both a denotation and connotation. The denotation of a sign is described as the literal meaning, where the connotation refers to the socio-cultural and personal associations one related to the sign. Denotation and connotation are widely acquainted with the literal meaning of a sign because it is most recognizable, but it is not to be confused with the literal transcription of the language. With a natural sign that can be produced with language codes, connotation simply refers to the less fixed and changeable meanings that varies from different instances, yet dependent on the relation it makes to the literal transcription.

Dominic Strinati articulates the denotation and connotation of a sign in his example of roses. Strinati asks the question, "How can we know that a bunch of roses signifies passion unless we also know the intention of the sender and the reaction of the receiver, and the kind of relationship they are in?" Strinati follows this question with an explanation of the relationship, are they lovers or are they family members, such as a grandparent and grandchild. The concept of giving or receiving flowers is dependent on the relationship and may hold many connotations as a sign. The sign or act of giving someone flowers is typically seen as a romantic gesture and we would see this gesture between lovers. If this is an interpretation of the gesture we do so based on the social relationship, not as a sign, but we can refer to the connotation and social effects to locate the sign. (SemioticsforBeginners)

Figure 4

Signs, such as the one just mentioned, are separated into sign classes. These sign classes all display the signals attempt to communicate a message and connection. Connections such as these are made based on context representation. For example, the image of a bear can simply be an image of a bear but placed in the context of a zoo one might understand that the bear exhibit is near. If one were to see the image of a bear on the highway, one would perceive the communication of the sign to read that bears could be near and crossing the road. The display of a physical object cannot be taken as an effective communicated message without the influences of the surrounding context which the sign resides. These signs are all part of different sign classes that are categorized base on the fit of the sign and how it communicates.

Sign classes are discussed as part of a 3-trichotomy framework. This framework is providing understanding of the three types of signifying relationships between signs. These three (3) trichotomies are referred to as the orders of relation, first through the third in that order.

The first trichotomy is fit to act as visual signs containing: qualities, visents, and systems.

Qualities: physical manifestation or distinct traits of an element

> Example: the color blue commonly represents water, a calming feeling, or cold temperature

Visent: an individual visual element in a performing role, capable of contrast and visually predictable

> Example: graphics, photographs, illustrations

System: involves prior semiotic participation, capable to depicting a sign's meaning

> Example: codes, handbooks, laws, procedures

An example of this first relation is a stop light. The qualities of a stop light contain three specific colors, red, yellow and green. The visent of the stop light occurs at moderate to high traffic intersections. It communicates to the driver to stop, caution or slow down, and to continue through the intersection.

The second trichotomy is the relation of the sign to the referent containing the iconic, indexic, and symbolic signs.

Iconic: relations based on similarity and resemblance (onomatopoeic words)

> Example: a driver's license photo is a relationship to your appearance

Indexic: relationships connected through physical or environmental contact (influence)

> Example: water signifies vegetation, windsock signifies wind strength and direction

Symbolic: consensual agreement that "this" stands for "that"

> Example: a printed name on a driver's license is just individual letters and numbers that produce sounds. These sounds are understood (mutually) as you, your name.

The third trichotomy is the authority toward action. Categories include display, assertion, and conclusion.

Display: a description of the arrangement, qualities, and subject matter

> Example: movies are a combination of smaller, simple, displays that generate a sequential communication to the receiver, person watching the movie

Assertion: propositional claim display is making about the world

> Example: posters or commercials portray underlying meaning that makes a case about a point of view. During the holidays there are many commercials for different products and the underlying meaning of those commercials is usually 'if you buy this product you or the person, you're buying this for will be happier'.

Conclusion: the conclusion is drawn from encounters, devised by the mind and behavior of the receiver to the sign

> Example: receiver feedback (about display assertion) as evidence, the person watching a commercial or movie forms conclusions based on their emotional response to the commercial or movie.

1st ORDER RELATION	2nd ORDER RELATION	3rd ORDER RELATION	
QUALITIES	VISENTS	SYSTEMS	FIT TO BE SIGNS
ICONIC	INDEXIC	SYMBOLIC	RELATION OF SIGN TO REFERENT
DISPLAY	ASSERTION	CONCLUSION	MOTIVATION

Figure 5

This framework for signifying relationships between signs covers the categories that are most important for understanding how signs communicate. The three (3) trichotomies provide the best understanding on the communication of signs. Knowing that each type is an advancement of the previous type to expand upon the meaning the sign is attempting to convey. Architecture monopolizes on the concept of elements building upon one another to form a larger entity containing a more complex meaning. American Sign Language is also a language communicated through signs that is dependent of the understanding of how a they communicate.

AMERICAN SIGN LANGUAGE

Definition of American Sign Language (n): a complete natural language composed of the same linguistic properties of a spoken language. ASL is expressed through a series of movements of the hands and face.

American Sign Language is an independent language like English and French. In the 1700s, Abbe Charles Michel de L'Eppe (a French man), showed the public that deaf people could communicate through the use of sign language. At this time people who were deaf were called Dumb, meaning they could not respond vocally because they could not hear. (Allen, 2005)

American Sign Language is a visual language composed of gestures, signs, finger-spelling, facial expressions, inflections, dialect, register, and accent. Similar to any spoken language, sign language has linguistic structure, including proper grammar rules and variation based on location. (Vicars, 2009) Word order of American Sign Language, when compared to English, has its own unique form. Figure 6 is an example of a simple sentence in both English and ASL. This specific grammar in ASL is stating the bicycle first so that the person reading the sign understands that the sentence topic is going to be related to or about the bicycle.

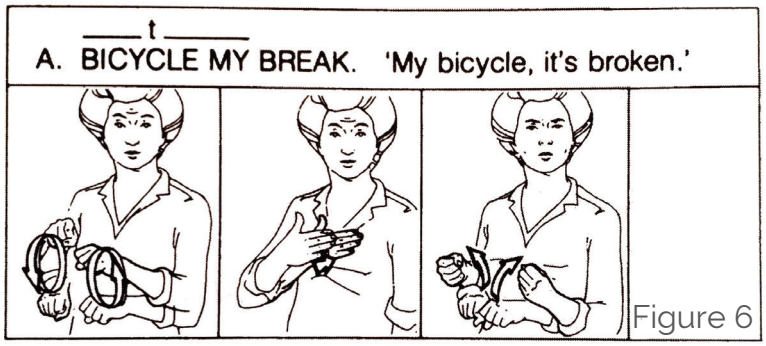
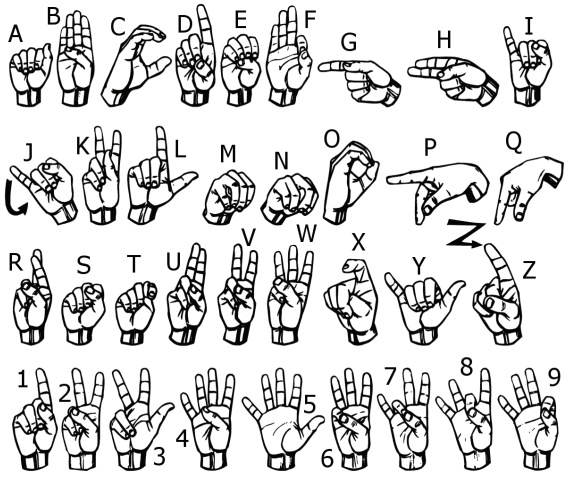
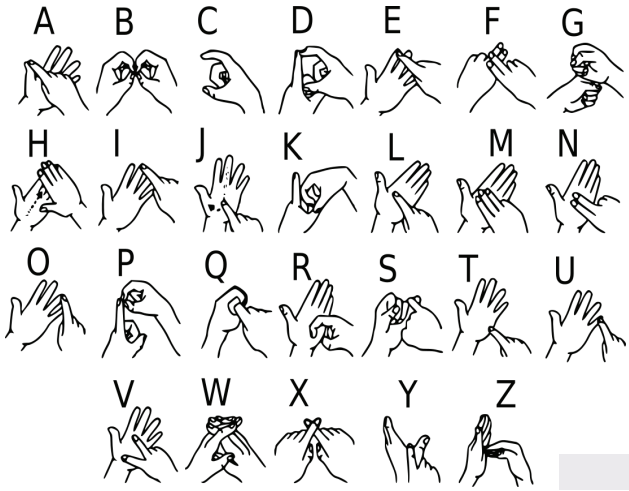


Figure 6

The general public often does not understand that English is not a deaf person's first language but their second. Similar to any spoken language around the world, Deaf communities around the world have developed accents or dialect over many years. Some signs are regional, unique to a specific place or group of people, while others are common nationwide and worldwide. For instance the ALPHABET sign for cactus in Arizona is not understood in North Dakota to be any sign. Whereas the sign for Korea is understood around the world. The complexity of their language is more than just gestures and random movement of the arms, hand, and fingers. The key to understanding sign language is facial expressions the message sent can be misunderstood.

AMERICAN SIGN LANGUAGE





BRITISH SIGN LANGUAGE

Figure 7 Figure 8

ARCHITECTURAL SIGN LANGUAGE

Architecture contains equivalent elements like those discovered in the study of signs and language and used to communicate to the building user. Physical objects, materials or spatial awareness are all instances that provoke a reaction or feedback from the user within or around elements of the built environment. The following section will describe my findings as a conclusion of connection between architecture as a language framework and architecture as it can communicate like a sign.

Language is the composition of carefully selected components. Architecture is also the composition of carefully selected components. It uses elements and forms to generate language equivalents such as lexemes, morphemes, sentences and phrases to communicate a story or trigger an emotion.

Definition of *lexeme* in architecture: the simplest form of any architectural element, point, line, plane, and volume.

> The language lexeme run is the abstract unit for further words such as runs, ran, and running. Architecture lexemes contain points, lines, planes, and volumes. A point is a position in space, that position in space moves along a linear path forming a line. Multiple connected lines form a plane and from that plane an extrusion occurs forming a simple volume. A volume is a collective form of length, width, and surface, but through the extrusion process adds depth, orientation and position of the volume. A simple example is the form of a triangle. The lexicon of the triangular form is the types of triangles that can be produced in this simple 3-sided form. Isosceles, scalene, equilateral, and right triangles are a more complex description of the simple architectural lexeme.

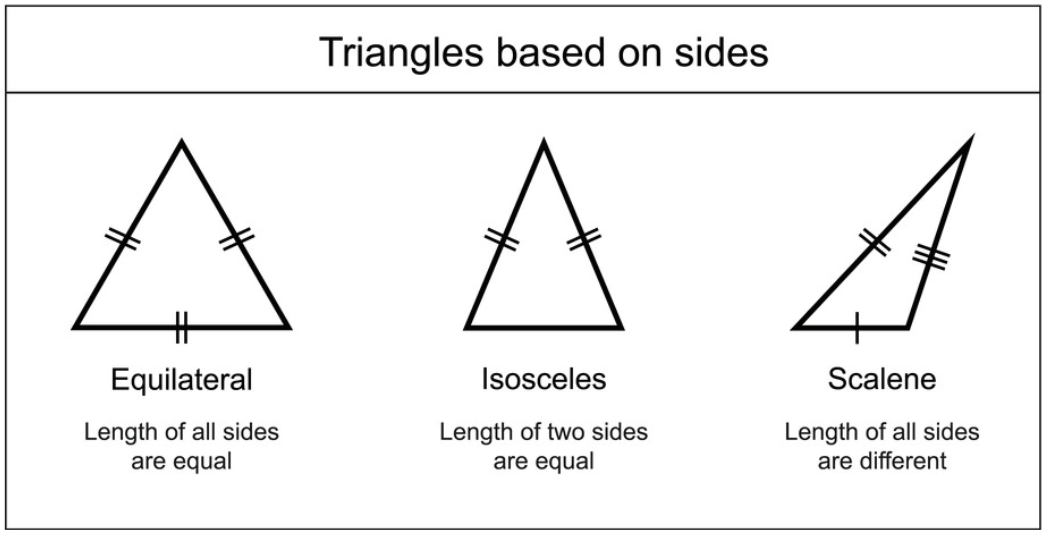
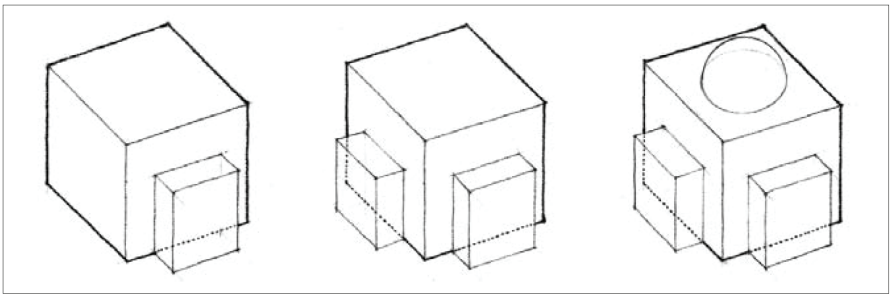


Figure 9

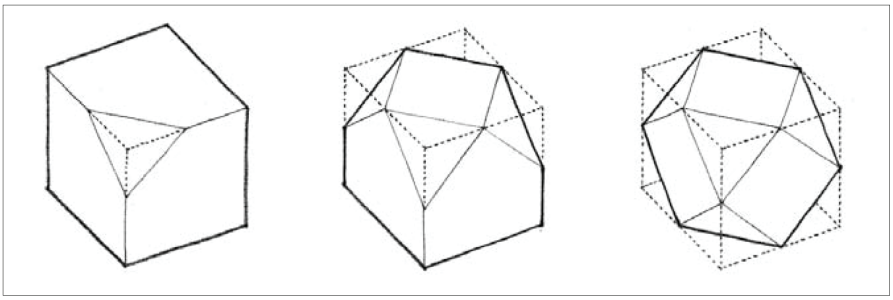
Definition of *morpheme* in architecture: an element in architecture that cannot be divided into smaller units but combined to form a larger element, the variation of form topology.

> The qualities of a space depend on the perceptions of the spatial boundaries defined by an element's form defined by its topology. A bound morpheme in architecture relates to the additive or subtractive elements of a form. This is typically seen with elements of the building to accommodate for interior spaces or creating a unique and interesting exterior. Derivational morphemes in architecture are topological forms that are manipulated by rotation, scaling, or displacement. Inflectional morphemes are seen in variations of the topology of a form. Examples of these variations can occur in elements such as brick coursing on a building.



Additive Transformation

A form can be transformed by the addition of elements to its volume. The nature of the additive process and the number and relative sizes of the elements being attached determine whether the identity of the initial form is altered or retained.



Subtractive Transformation

A form can be transformed by subtracting a portion of its volume. Depending on the extent of the subtractive process, the form can retain its initial identity or be transformed into a form of another family. For example, a cube can retain its identity as a cube even though a portion of it is removed, or be transformed into a series of regular polyhedrons that begin to approximate a sphere.

Figure 10

Definition of *pronunciation* in architecture: a variation in the expression of an architectural form based on the material used to realize it.

> The detailed choice of a material presents each space with a specific articulated expression. Pronunciation is how one expresses a word in language, this varies between areas of the country or how one was raised. In architecture a tabletop could be made of wood, glass, or stone. The chosen material would depend on the surrounding spatial elements or the context of the element itself. How does it speak within a space?

Figure 11

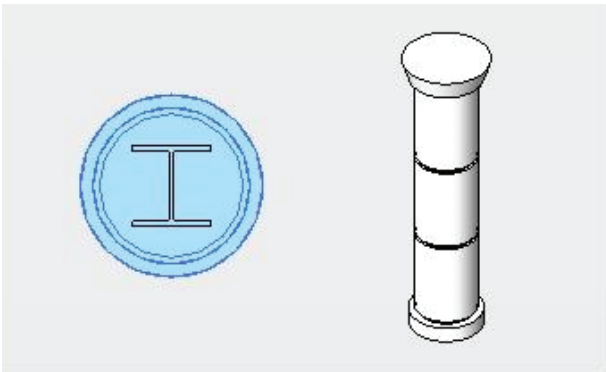
Figure 12

Figure 13

Definition of *inflection* in architecture: a change in form to express the functionality of an element.

> The inflection of a column can change depending on the manner in which it is used. A column, when it is vertical, can be seen as a load bearing device, and when it is horizontal, it can be seen as a strut or a brace. An architectural column's primary function is to add visual aesthetics to the building, showing the structure in a way that adds a sense of safety to a space. A structural column's function is usually hidden within the architectural walls of the building or space. These columns are designed to support the other structural elements of the building and are not typically seen by the building occupants unless they are designed to be seen.

ARCHITECTURAL COLUMN



STRUCTURAL COLUMN

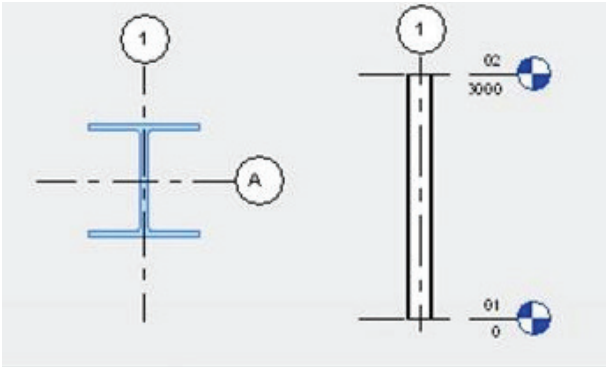


Figure 14

Definition of *sentence* in architecture: a set of spaces arranged in such a way that one navigates itself to convey a statement, story, or question.

> How is a space read in interactions? Think about the organization and circulation of a house; when you walk in the front door the entry is typically welcoming space that presents you with a few different options on where to go, stay down or go up. The main level typically contains the living and dining spaces, these large gathering spaces encourage interactions with others in the space. The other option is to take the stairs up to the bedrooms and other private dwelling spaces. In the event of sleeping or not wanting to interact in the larger gathering spaces within the home. Both levels are arranged with given spaces informing the user of their intended use.

Definition of *sentence meaning* in architecture: how an arranged space is conveyed and then perceived by the user or persons within the space. Those conclusive thoughts are formed by the user following their interactions with the building or corresponding building elements.

> A simple example is the event that the same person walks into two different spaces. The first space is a room with low ceilings and minimal windows. The second space is a room with taller than average ceilings and sizable windows, letting large amounts of sunlight into the space. The first space is going to inform the conclusion that the space is closed off and unwelcoming, whereas the second space is going to feel welcoming, comfortable, and happy. The varying ceiling height and generous window size making the second space the preferred space to occupy.

A narrow, enclosed path naturally encourages forward motion. To accommodate more traffic as well as to create spaces for pausing, resting, or viewing, sections of a path can be widened. The path can also be enlarged by merging with the spaces it passes through.

Within a large space, a path can be random, without form or definition, and be determined by the activities and arrangement of furnishings within the space.

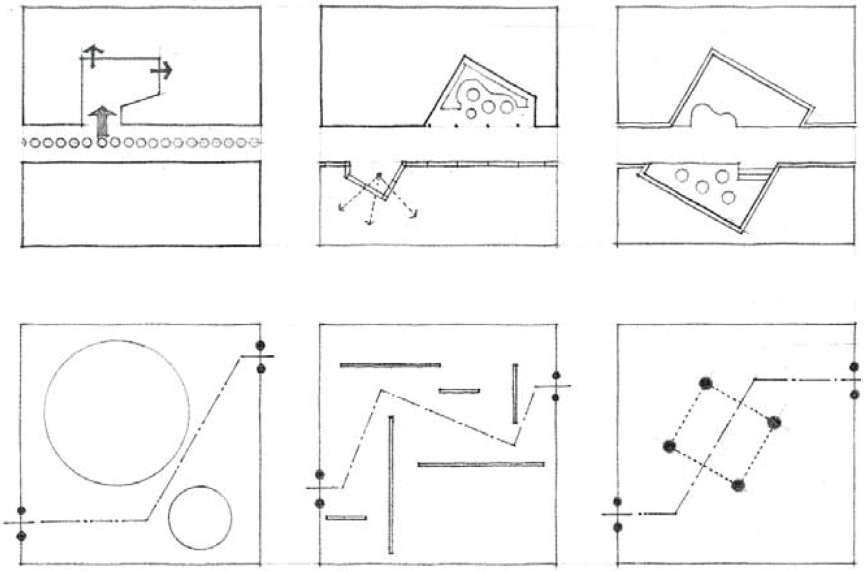


Figure 15

Definition of *phrase* in architecture: a grouping of elements together to form a unified element or space, creating a formation.

> Spatial organization and the composition of furniture in a space influence the circulation that can occur. Organizing the furniture in an office space can be an expression of the work being done in the space. Desks organized in a linear function with partitions separating workstations infer that the work being done is confidential and not to be shared, minimal circulation would occur in this type of environment. Where workstations that are clustered in groups would encourage collaboration between team members on the work being done. Circulation flexibility would be maximized in this space to accommodate the work being done.

Enclosed

forming a public galleria or private corridor that relates to the spaces it links though entrances in a wall plane;

Open on One Side

forming a balcony or gallery that provides visual and spatial continuity with the spaces it links;

Open on Both Sides

forming a colonnaded passageway that becomes a physical extension of the space it passes through.

The width and height of a circulation space should be proportionate with the type and amount of movement it must handle. A distinction in scale should be established between a public promenade, a more private hall, and a service corridor.

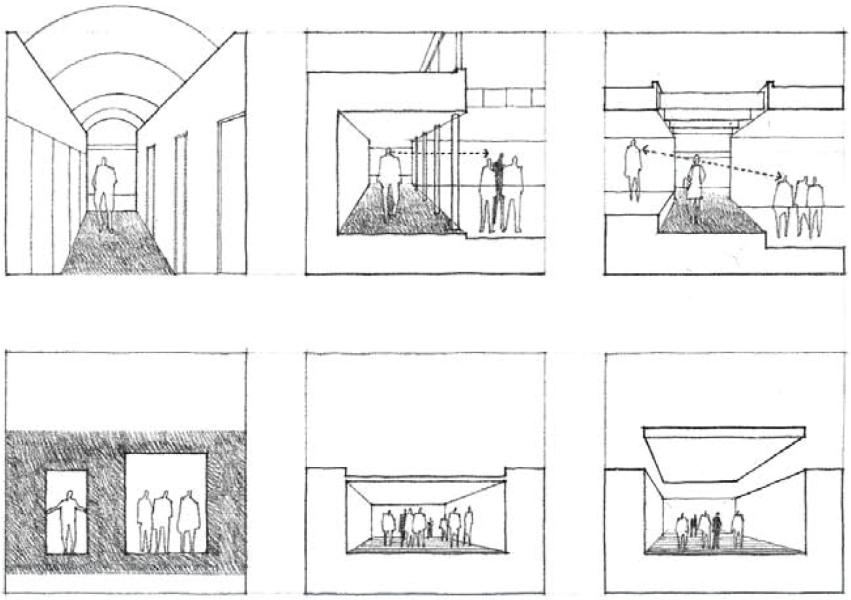


Figure 16

Signs have the same capabilities as language as a communication through architecture. Architectural elements are used in composition together to create a larger body that portrays a more complex meaning of communication through architecture. Like language, elements of semiotics can be translated into many descriptions, definitions and provoke emotions from those in and around the built environment that is architecture.

Definition of a *qualities* in architecture: a display of the color, texture, or visual appearance of the architectural element.

> Most architectural elements are visual elements expressed through a series of visual expressions. Solid surfaces, such as counter tops, display qualities of a material. That visual material embodies additional elements including weight and hardness to articulate the expression of the solid surface.

Definition of a *visent* in architecture: a built composition or element that can be seen or produced in a visual manner.

> Textures are commonly experienced through touch, they can be experience through the visual sense. Not all elements are visually appealing but on occasion aesthetics is not the main communication of the element. In this instance the main communication could be cautioning one about an uneven surface versus a visually aesthetic one.

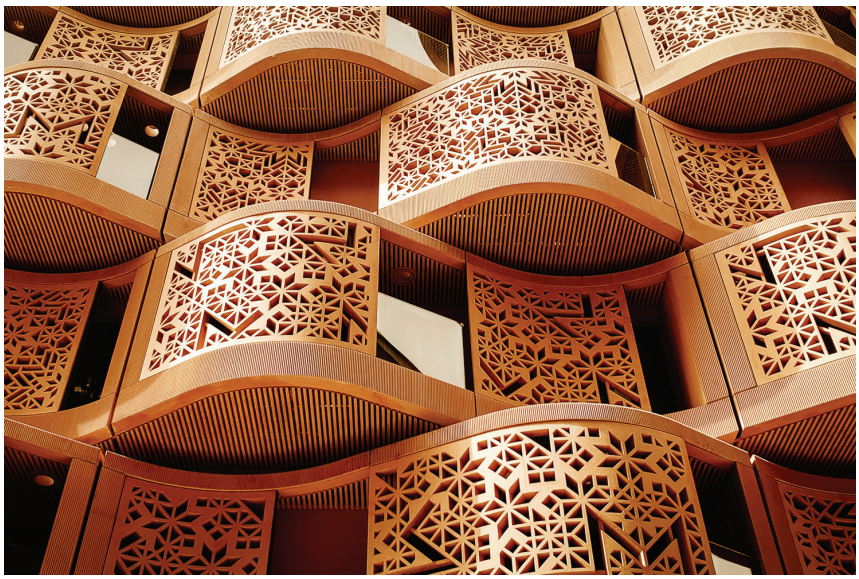


Figure 17

Definition of a *system* in architecture: the final composition of elements.

> A system comprised of architectural elements is best described as the combination of architectural qualities and the display of the element in a visual manner. The image below is designed for the Islamic culture

Figure 18

Definition of *indexical* in architecture: an element or expression of elements that have a meaning dependent on the context in which it is used.

> A building's connection to the site or environment is an example of an expression of elements through communication. A building entry in the back of a site is going to have a different approach connotation than a building entry in the front and center of the site. The designer could be trying to influence the users' comprehensive conclusions to mean the building is very public and welcoming by being up front. Or the design could intend the entry still be grand but exclusive by placing it at the back of the site. In each instance the user can infer that the entry to the building was designed to provide an experience based on context (building entry on the site). A portico or porch is indexical of an entrance to a building.

> The extravagant entry to the Sheikh Zayed Grand Mosque in Abu Dhabi (figure 19) is set at the far end of the courtyard. Along with the scale of the entry and corresponding elements, the entry communicates power, security, and cultural significance.

Figure 19

Definition of a *paradigm* in architecture: each part of a whole is properly disposed with reference to other parts and to its purpose to produce a harmonious arrangement.

> All architectural elements are part of a category, casework, structural components, finishes, etc. Within each category the elements hold its own significance and contribution to the final design. This can be done through the articulation of elements, a symmetrical layout of a room and the furniture within, the hierarchy of an element making a statement and drawing the user to a particular area within the space, or by the transformation principle. The transformation principle allows an architectural concept to be altered through a variety of permutations as a response to the surrounding context without the loss of the concept's identity.

HIERARCHY

Figure 20

REPETITION

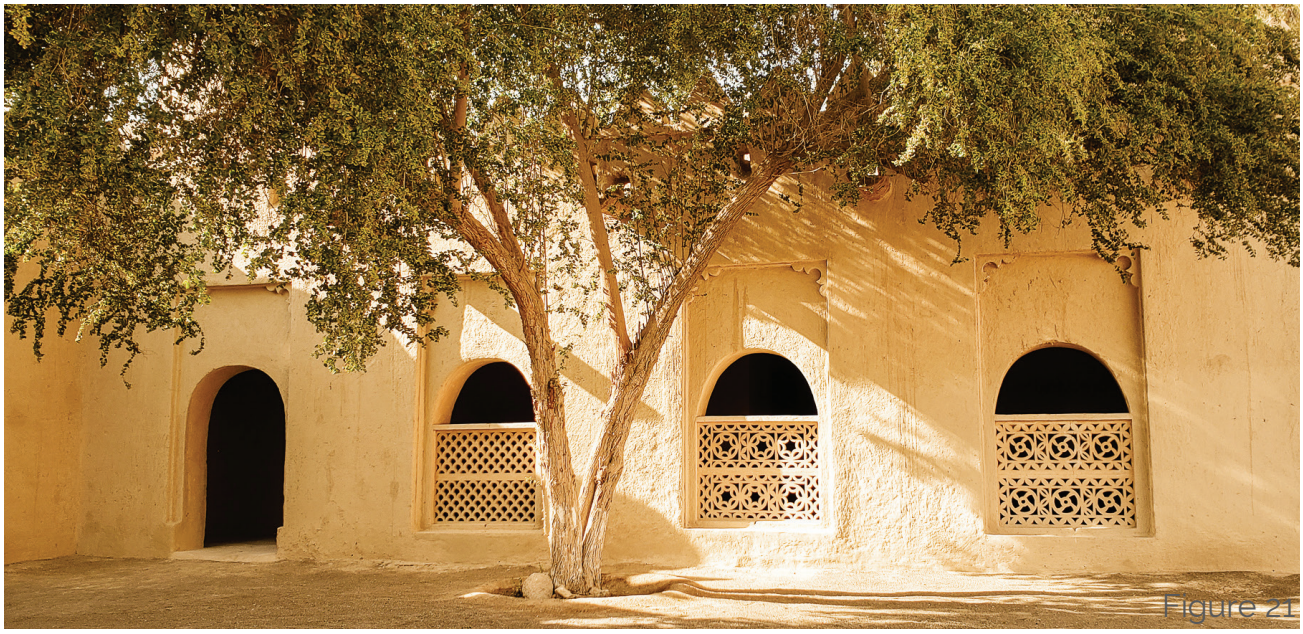


Figure 21

SYMMETRY

Figure 22

Definition of a *syntagm* in architecture: the combination and spatial relationship between spaces both interconnected and adjacent.

> The organization of spaces and their relationships to one another commonly influence the user's comprehension of that built environment. The organization and spatial layout of rooms in a building are equivalent to the designer's story and what they want the space to communicate. A museum generally focuses on the cohesion and placement of exhibits to tell the story of the art; where has it been, where it is now, and where is it going.

SPATIAL ORGANIZATION

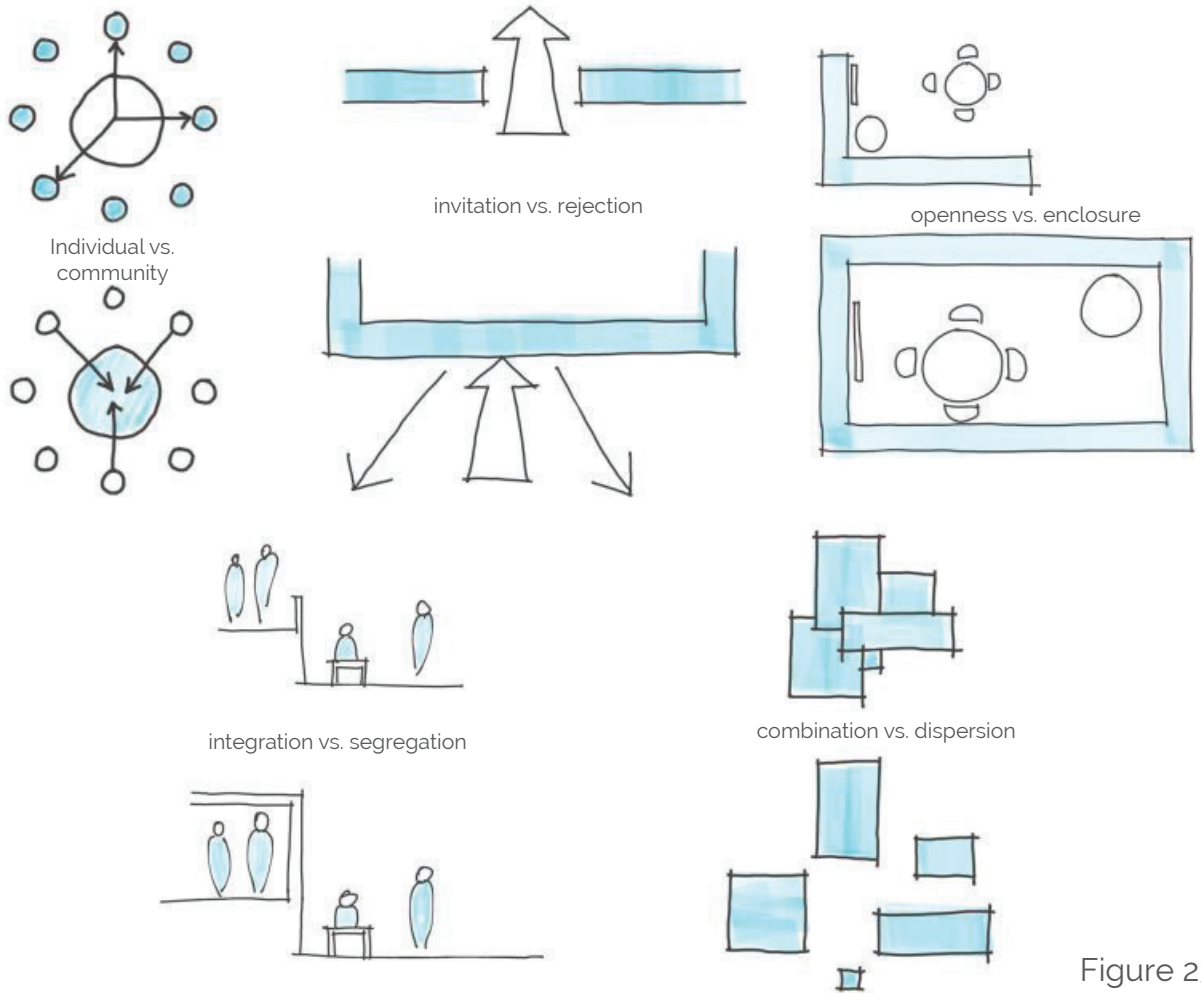


Figure 23

Definition of *social codes* in architecture: elements displayed as known or common in the context of a building.

>The understanding of such elements is formed mostly by observation. One understands how to walk through a door or sit in a chair because that is how they see others around them using those architectural elements. However, without the visual influence, one would interact with the element and discover its intended purpose based on the surrounding context.

Definition of *denotation* in architecture: the literal meaning of the element and its intended function. The basic understanding of the primary elements and how they are understood in a space (their context).

> An element it its purest form can be broken down into a point, line, plane, or volume. In the same way a building can be broken down into elements such as walls, floors, roof, or furniture. When these elements are combined, they make up what is commonly referred to as a building. Using a wall as a smaller example, its intended functions include providing privacy, both visually and acoustically, but can also function as a structural element by providing support to other elements such as the floor above or the roof of the building. The construction of this wall is typically comprised of metal studs, the occasional acoustic insulation, and a layer of gypsum wall board on either side. The combination of these (even smaller) elements support the wall's larger intended function. The denotation of the wall would be its constituent parts, namely, the metal studs, the acoustical insulation and the gypsum wall boards.

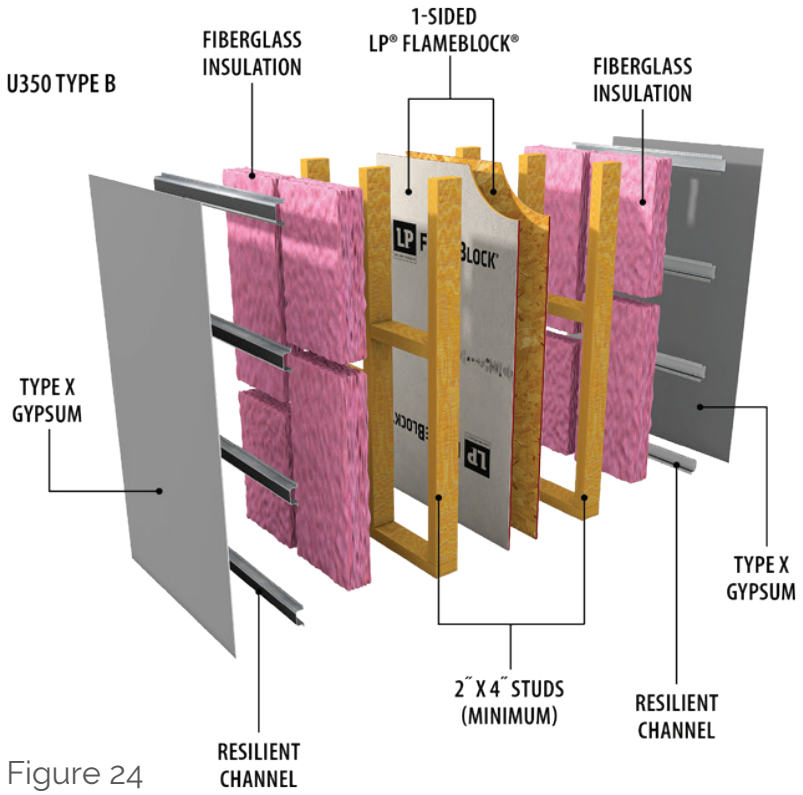


Figure 24

Definition of *connotation* in architecture: the changeable meaning and understanding of an element. The meaning may change from instance to instance.

> When a user walks into a space, they immediately start to form conclusions about how they feel in the space. This conclusion can influence their following decisions and emotions made within the space. Each user will encounter the space differently and therefore form different conclusions and opinions. The designer can attempt to create a distinct experience, but the assumptions made in the space by the users will vary in understanding. The reading of an architectural element differently based on its function is connotative. A wall can be read as a privacy screen or a load bearing support in different connotative instances.

Definition of *sign classes* in architecture: any form of display or composition that attempts to communicate a story, feeling, or expression.

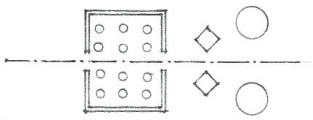
> Architectural elements can be organized in a variety of categories based on fit and context. There is no distinct form of organization for a composition of design. The ordering principles, primary elements, or smaller architectural elements are individual to each design and designer. The intended purpose of these sign classes is to aid in organizing selected elements for the designer's overall composition; by wanting to stimulate a user's emotions or convey a meaningful message from the designer to the user.

ORDERING PRINCIPLES

Axis

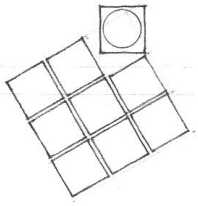
A line established by two points in space, about which forms and spaces can be arranged in a symmetrical or balanced manner.

Symmetry



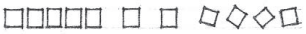
The balanced distribution and arrangement of equivalent forms and spaces on opposite sides of a dividing line or plane, or about a center or axis.

Hierarchy



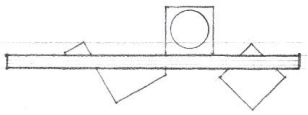
The articulation of the importance or significance of a form or space by its size, shape, or placement relative to the other forms and spaces of the organization.

Rhythm



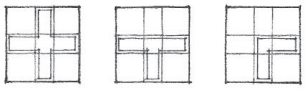
A unifying movement characterized by a patterned repetition or alternation of formal elements or motifs in the same or a modified form.

Datum



A line, plane, or volume that, by its continuity and regularity, serves to gather, measure, and organize a pattern of forms and spaces.

Transformation



The principle that an architectural concept, structure, or organization can be altered through a series of discrete manipulations and permutations in response to a specific context or set of conditions without a loss of identity or concept.

Figure 25

CONCLUSION

"As in language, architectural forms and spaces also have connotative meanings: associative values and symbolic content that are subject to personal and cultural interpretation, which can change with time. The spires of a Gothic cathedral can stand for the realm, values, or goals of Christianity. The Greek column can convey the notation of democracy, or, as in America in the early 19th century, the presence of civilization in a new world.

Although the study of connotative meanings, of semiotics and symbology in architecture, is beyond the scope of this book, it should be noted here that architecture, in combining form and space into a single essence, not only facilitates purpose but communicates meaning. The art of architecture makes our existence not only visible but meaningful." (Ching, 2015)

Language Units	***American Sign Language (ASL)***	***Architecture Sign Language (ArchSL)***
Lexicon: language framework = combined conventions	Ex. Language (vocab.) Signs, fingerspelling, facial expressions, & additional body movements	Architectural Elements (listed below) Primary elements (FSO) Point, line, plane, volume
Phonology: the study of speech sounds	(hand movements, shape, location) Ex. FATHER, MOTHER, FINE These signs all have the same handshape but signed in different locations on the body.	Form (FSO) "Architectural form is the point of contact between mass & space. Forms, textures, materials, etc. all combine to articulate space." Architectural form contains different materials, i.e. a plane, it is one primary element but embodies different phonologies by the material of that plane. Ex. The plane being made of wood, marble, brick, concrete, etc.
Morphology: study of words & means of units, ex. Suffix & prefixes	Ex. Free vs. Bound Signs Free- AGAIN, SEE, YOUR (standalone sign) Bound- TEACHER, 2-WEEK, 1 year ago (compound sign)	Form & Space (FSO) Defining space & Surface articulation; changing the base plane to articulate the specific environment.
Syntax: sentence construction, word order	ASL has many sentence structures and formations Ex. GIRL KICK BALL (The girl kicked the ball) or BALL(t), GIRL KICK (The ball was kicked by the girl) Vs. BALL KICK GIRL (The ball kicked the girl)	Organization (FSO) Spatial relationships & Spatial Organization; like the construction of sentences, the construction of laying out spaces in a particular environment. Space grammar.
Semantics: sentence meaning, the application of combining syntax	Ex. (reference *Syntax* example) Context contributes to the meaning of the signs and sentence	How you come to understand the meaning of the arch. paragraph Circulation (FSO) the means of navigating through related spaces (semantics); in terms of organization (syntax)

Figure 26

Grammar: language rules, combined paragraph of semantic sentences Rules applied to a setting as a whole	Focus on the topic or question first. Gives an understanding/preface to what the sentence (conversation) is going to be about.	Rules for expressing arch. ideas Principles (FSO) "Order: condition in which each part of a whole is properly disposed w/ reference to other parts & purpose to produce a harmonious arrangement" Like writing an essay, introduction, body, conclusion.
Language: method of combining elements, conveyed meaning of a topic Combined language units form the resulting language	Ex. Facial expressions, body position, hand movements, language signs & fingerspelling all combine to produce ASL	Elements in place of the architectural solution. How are these elements interpreted by the user? To convey the desired meaning; Combination of elements to provide a meaning in architecture. See **conclusion**.

Signed Language Elements: "verbal" sign itself; "non-verbal" facial expressions, body position

Architectural Elements: proportion, color, arrangement, scale, intimacy (mood), light, materiality, landscape (context), style, form, point, line, plane, and volume

(FSO) Ching, F. (2015). Architecture: Form, Space, & Order. Wiley.

The language of signs and the language of architecture each encompass their own strengths and weaknesses as an effective form of communication. Each language is not transparent, they are both an unspoken communication that must be learned before it can be fully understood.

The language of sign and American Sign Language are less effective in communicating elements such as morphology. Sign in ASL are read in a singular form unless two or more signs are combined. The sign for DOG is singular unless signed with the word FEW or MANY. Another instance is the DEER XING sign on the highway, there is a single image of a deer but imply that many could be in the area. The language of signs and American Sign Language (ASL) are the most effective in communicating semantics, phonetics, and grammar. Semantics and syntax in signs aid in the understanding of the sign's meaning based on its context. The display of phonology is be depicted through signs and the context which they are presented in. Specifically, in American Sign Language, grammar is utilized most effectively through signs. Having a language framework and rules, there are only a set number of combinations that can be made to understand the intended meaning of the combined signs. Whereas in architecture there are an infinite number of interpretations of elements that vary with each interaction.

The language of architecture is the most effective in communicating the elements of morphology, syntagms, and lexicons. Morphology in the simplest form articulates a change is in a space through architectural elements, it is more difficult to depict the morphology or morpheme of a sign unless you know of another sign to compare it to. Architectural morphemes can also be distinguished by the variation in the topology of the form. The syntagm in architecture is the combination of architectural elements through organization and circulation. Each of these interconnected spaces influence each other. As designers this is an important element of design to consider for every project for it to be deemed successful by the user. Finally, the lexicon is best displayed through the primary architectural elements. It is the most understood example of the composition of simple elements, like

the point, a line, or plane and how these elements combined. Designers use these simple elements to create more complex architectural elements that can be manipulated to articulate the designer's intended meaning for the elements or space which the element is used. Though architecture is effective in many ways, is lacks in communicating the elements of expression or a definite communicated meaning of an element. Semantics and pragmatics in architecture are difficult to define because an element can be interpreted in various ways.

Through this research process it is evident that the language of architecture is communicated through a series of nonverbal elements like the signed language of American Sign Language. Communication doesn't always occur through a traditional verbal or spoken language. Each language, though they may be more effective at communicating one aspect of language than the other, each have their own way of articulating primary language equivalents. Moving forward with a design beyond this research requires specific attention to how the architecture is communicating, what is being communicated and why the architecture being communicated in this way. The language of sign is a beautiful skill to possess and understand and the communicated language of architecture is no different.


Figure 27


Figure 28


Figure 29


Figure 30

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TABLES & FIGURES