

Aesthetic principles of metaphor, art and architecture

(Aesthetics, metaphors and architecture)

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Abstract:

While aesthetics is a guiding principle in matters of artistic beauty and taste, metaphor is the warrant to taste and is used to form works of art and architecture. Aesthetics is also reasoning matters having to do with understanding perceptions. Therefore it is appropriate to consider the aesthetic nature of architecture and metaphors. William Wilson said that "a generous *Age of Aquarius aesthetic* that said that everything was art" It was during this time that we proposed that *architecture is an art because it too makes metaphors* and held the lecture series at Yale University. Most definitions of aesthetics concern the appreciation of beauty or good taste including the basis for making such judgments. Without a theory of metaphors these judgments mostly deal with probability and are inductive or deductive, deductive when depending on accepted premises which is the commonplace of the metaphor or inductive using logical induction. Inductive reasoning is inductive inference from the observed to the unobserved. It was given its classic formulation by David Hume, who noted that such inferences typically rely on the assumption that the future will resemble the past, or on the assumption that events of a certain type are necessarily connected, via a relation of causation, to events of another type.

Early monographs justifying architecture as the making of metaphors were steeped in deductive reasoning since we could not find new information pertaining to metaphors. Many of my monographs included analyzing and explaining the syllogism:

- *Art [F] is the making of metaphors*
- *Architecture is an art[F]*
- *Therefore architecture is the making of metaphors.*

Till now we did nothing to reason why art *[F]* is neither the making of metaphors nor why architecture is an art. Since 1967 I proceeded to analyze the presumptions and find its many applications. This new information in *Metaphor and Thought* by Andrew Ortony first published in 1979, provides evidence to support inductive reasoning and to this end each axiom is its own warrant to the inferences of the above syllogism and the answer to questions of why metaphor is the stasis to any of the syllogism's claims and implications.

In *argumentation* [A] it is noted that in induction there is no new information added. In both methods the metaphor is at their root and as such the basis of aesthetics and as such essential to understand the stasis to what makes all arts the making of metaphors and how that Wilson's statement is true for everything as most are metaphorical as well. The matter then is one of standards, social rightness and the ability any one or another work has an explanation of its form.

Architecture as the making of metaphors not only is the stasis to why architecture is art but also explains the formation of architectural aesthetic vocabulary. The below is predominantly developed from a study of "Metaphors and Thought" by Andrew Ortony, [1] and, is in addition to over forty years of my work about "architecture

as the making of metaphors. It is my hope that this monograph will introduce to aesthetics an architectural vocabulary to further the appreciation of works of architecture.

Key Words:

metaphor, architecture, aesthetics, parte, generative metaphor, carrying –over, top-down, renaissance, reasoning, concept, conduit metaphor, dead metaphor, conduit, novel images, image metaphors, abstract concepts, perform abstract reasoning, conceptual system, onomatopoeics metaphors, mapping, invariance principle, emphatics, surrogates, micro, macro, direct, indirect, deductive, inductive, appreciation, commonplace reasoning, prototype theory, gestalt, inexpressibility thesis, vividness thesis, mnemonic, art [F]

Axioms: 16,343 words

Axioms (shown in Roman numerals) are self-evident principles that I have derived out of Ortony's *Metaphor and Thought*[1.0] and accept as true without proof as the basis for future arguments; a postulates or inferences including their warrants (which I have footnoted as 1. _ _ throughout). These axioms are in themselves clarification, enlightenment, and illumination removing ambiguity where the derivative reference (Ortony) has many applications. Hopefully, these can be starting points from which other statements can be logically derived. Unlike theorems, axioms cannot be derived by principles of deduction as I wrote: "*The metametaphor theorem*" published by *Architectural Scientific Journal*, Vol. No. 8; 1994 Beirut Arab University. The below axioms define properties for the domain of a specific theory which evolved out of the stasis defending *architecture as an art* and in that sense, a "postulate" and "assumption". Thusly, I presume to axiomatize a system of knowledge to show that these claims can be derived from a small, well-understood set of sentences (the axioms). "*Universality, Global uniqueness, Sameness, Identity, and Identity abuse*" are just some of the axioms of web architecture. Francis Hsu of Rutgers writes that "*Software Architecture Axioms is a worthy goal. First, let's be clear that software axioms are not necessarily mathematical in nature*".

Furthermore, in his book titled "The Book of Architecture Axioms" Gavin Terrill wrote: "*Don't put your resume ahead of the requirements Simplify essential complexity; diminish accidental complexity; You're negotiating more often than you think ;It's never too early to think about performance and resiliency testing; Fight repetition; Don't Control, but Observe and Architect as Janitor*". In "Axiomatic design in the customizing home building industry published by *Engineering, Construction and Architectural Management*; 2002;vol 9; issue 4;page 318-324 Kurt Psilander wrote that "*the developer would find a tool very useful that systematically and reliably analyses customer taste in terms of functional requirements (FRs). Such a tool increases the reliability of the procedure the entrepreneur applies to chisel out a concrete project description based on a vision of the tastes of a specific group of customers. It also ensures that future agents do not distort the developer's specified FRs when design parameters are selected for the realization of the project. Axiomatic design is one method to support such a procedure. This tool was developed for the manufacturing industry but is applied here in the housing sector. Some hypothetical examples are presented*". Aside from building-architect's axioms directing that "form follows function"; follow

manufacturers requirements and local codes and ordinances, AIA standards for professional practice architectural axioms are few and far between.

1. Introduction:

Arnold Berlant's writes that: "Sense perception lies at the etymological (history of words) core of aesthetics (Gr. aesthesis, perception by the senses), and is central to aesthetic theory, aesthetic experience, and their applications. Berlant finds in the aesthetic a source, a sign, and a standard of human value". It is this human value which is one leg of the metaphor and the very basis for the view that metaphor is the foundation for both art, architecture and aesthetics, and why I have spent over forty years researching the stasis to architecture being an art (because it too makes metaphors) it can also be shown that this same stasis is the commonplace to the works of aesthetic thought and investigation. . This coincidence (between aesthetics and art) confirms the intrinsic nature of this study of epistemology of architecture and aesthetics. The metaphoric evidence I believe will prove both useful to the creation, teaching and valuation of works of art as well as their architectural off-spring. In fact metaphor is the driving part for most creative arts and architectural works.

Some contemporary aesthetic theory differs with how best to define the term "art", What should we judge when we judge art?, What should art be like?, The value of art, things of value which define humanity itself; contrasted to Raymond Williams who argues that there is no unique aesthetic object but a continuum of cultural forms from ordinary speech to experiences that are signaled as art by a frame, institution or special event. Conversations about aesthetics, metaphors and architecture reassess current and traditional issues by providing a scientific analysis for the way metaphors work in architecture.

The commonality of all arts is that they express thought in terms of their peculiar craft and thus they (all arts) are technically metaphoric, metaphors because they transfer, carry-over and express one thing (some idea) in terms of another (the craft). {Parenthetically, there is no doubt that craft itself derives from ideas and concepts and within each is a sub-metaphor}. The sculptor who finds the figure as he malle the block is where the craft and the material inform the artist. The splashes of paint to canvas by Jackson Pollack even prevented any slow and deliberate cognition until the process was complete. Mies van der Rohe belittles his forms by simply ascribing his end result to being faithful to the materials and their properties. While all art is not expressed as a linguistic metaphor all arts are metaphoric. Likewise, if architecture is the making of metaphors what are the linguistic, psychological, and cognition science's commonalities between architecture and metaphors? This monograph is linguistic analogy transferring from linguistic, psychological and cognitive fields to art and architecture what has been scientifically studied.

This is the "stasis" (the state of equilibrium {equipoise} or inactivity caused by opposing equal forces) of the controversy of architecture being an art; that if architecture behaves, acts, looks and works like art than it too must be an art. Why? Because it, too, makes metaphors, and those metaphors are varied in depth, kind, scope and context. It is the stasis because it is where art and architecture meet. The metaphor is the conceptual focal point. While many claim that the architect is the "techne" artist being a crafts man

point has been conceptual and so useful as to bridge, carry-over and provide both artist and architect a common authority over the making of the built environment.

As stasis, “architecture as the making of metaphors” enables the center of the dispute to be argued with common purpose. So this is a stasis in definition which concedes conjecture. While there may be other concepts justifying the relationship between art and architecture the metaphor is the stasis, common ground and apparent commonality. It not only is apparent but with wide and broad applications to a variety of arts and architectural definitions, practices and contexts. There may have been a time when the architect was the “master builder” and the lead craftsman but for most that is only true by his skill in drawing, design and specifying and not his skill as a master carpenter.

Before solidifying our hypothesis about architecture and metaphors we both compared architecture to the art of sculpture reflecting my wife Christina’s work as a sculptress and my work as an architect and designer. It soon became apparent that while we could easily agree that buildings were “sculptural”, “colorful”, “lyrical”, “graceful”, “rhythmic” etc. these were illusive and neither a field, base, or a true commonality to all the arts, including sculpture and architecture; so what was it?

The commonality of all arts is that they technically express something in terms of their peculiar craft and thus they are metaphoric. However technically metaphoric, how does architecture conceptually make metaphors and is there an influence between the technical and the conceptual architectural metaphor?

“If the walls could only speak”; they do! Are you listening?

When kingdoms created dynasty’s iconic buildings the architect and artisans took their cues from the reigning monarch. In our modern democratic pluralistic society the free reign of ideas and opinions as to contexts and their meanings are diverse. Not only is my childhood quest relevant but the essence of the responsibility of today’s architects who not only reasons the technical but individually reasons the conceptual. It is to the architect that society turns to be informed about the shape and form of the context in which life will be played. With this charge the need to know that we know and do by reasoning what science verifies by the scientific method to know that we know about the buildings, parks, and places we set into the environment. It is a public and private charge included in the contract for professional services but unspoken as professional life’s experience; to prove the relevant, meaningful and beneficial metaphors that edify encourage and equip society as well as provide for its’ health, safety and welfare. So it is critical to realize, control and accept as commonplace that the role of the architect is to do much more than build but build masterfully.

In 1967, during the series of colloquia [2] at Yale on art, Irving Kriesberg [3] had spoken about the characteristics of painting (art) as a metaphor. It seemed at once that this observation was applicable to architecture (since scholars have long proclaimed that architecture was an art) and to the design of occupiable forms. An appeal to Paul Weiss drew from him the suggestion that we turn to English language and literature in order to develop a comprehensive, specific, and therefore usable definition of metaphor. But it soon became evident that the term was being defined through examples without explaining the phenomenon of the metaphor; for our purposes it would be essential to

have evidence of the practical utility of the idea embodied in the metaphor as well as obvious physical examples.

However, since then, in 1977, a group of leading philosophers, psychologist, linguists, and educators gathered at the University of Illinois at Urbana-Champaign to participate in a multi disciplinary conference on metaphor and thought which was attended by nearly a thousand people. Our symposium at Yale was had a smaller attendance and our proceedings were transcribed and later in 1971 partially published in *Main Currents in Modern Thought*. [4] 1979 research has been completed and documents in Andrew Ortony's compendium book on metaphor and thought to advance this metaphoric comparison.

With all the controversy around "knowing"; how do we know we know and the inaccuracy of language and dubious nature of scientific conclusions I have written over fifteen monographs about "architecture as the making of metaphors" This is the first with the sciences of linguistic, psychology and cognition definitions of the metaphor and therefore a set of third party facts by which to base our comparison. It was my hope that these commonalities provided substantive reasons to allow the metaphor linking architecture to metaphors as my theorem (stasis): "architecture is the making of metaphors".

"If art is the making of metaphors and architecture is an art then it too must make metaphors. But until now aside from this formal logic we have not shown the informal logic, argument and evidence of this proposition.

The below are excerpts from my monograph of paradigms and axioms about architecture based on Metaphor and Thought. In each of the below cases I have first paraphrased the scientist's conclusions based on a notable commonality to architecture where space allowed described an architectural process or product in the terms of each finding. Out of these comparisons there came topoi [5] (A traditional theme or motif; a literary convention.) which we can use to describe architecture and aesthetics, all below sections and paragraphs reference Metaphor and Thought by A. Ortony. [1]

2. Relevance:

Whether by formal or informal reasoning, whether by deductive or inductive reasoning it is necessary to know that aesthetics' fundamental basis for linking a specific case to general referent is, as art, bridging the craft to the craftsman, the concept to the craft and the observation to a model. . While in earlier monographs I have dealt with the specifics of these relationships this monograph presents the ways metaphors work and by induction support claims.

The study shows that metaphors are not all the same and work in different ways. These different ways are the evidence for the inferences to the claims and resolution significant to aesthetics, art, and architecture; namely that artist, art critiques, philosophers, architects have an awareness of many the shapes and forms of metaphors and their possible inclusion in what can be judged and included. Each of the below syllogisms is meant to provide some of the early reasoning supporting our original research.

a. Art is the making of metaphors

b. Architecture is an art

c. Architecture is an art

- A. Art transfers one to another*
- B. Metaphor transfers*
- C. Art is a metaphor*

- I. Aesthetics referents taste*
- II. Taste is a metaphor*
- III. Aesthetics is a metaphor*

- aa. Aesthetics is a metaphor*
- bb. Architecture is a metaphor*
- cc. Architecture is aesthetics*

Aesthetics mainstay: 'beauty is in the eye of the beholder' where the beholder is the referent of the metaphor and the necessary completion of the judgment. While there can be an aesthetic experience, without such a referent it's understating and taste would be irrelevant. With two referents, the social norm and the specific case, the experience and taste is, too, a metaphor. As metaphor carries-over, transfers and talks about one thing in terms of another; taste is at the heart of determining whether a work is art, its value, a work of architecture, etc. If there is no bridge then the work is another kind of metaphor, perhaps a technical metaphor linked to the craft of the art and if there is no bridge, determining how close or far from the ideal would be capricious. Yet one can describe ones feelings involving the senses. Having studied behavioral psychology many of my earlier design projects were predicated on the affects of space, volumes, planes and shapes on the five senses. I admired and under-studied with architect, Frederick Kiesler.

Yet these relationships between aesthetics and metaphor, while useful do not wholly explain the aesthetic and sensual experience of art or architecture. It only assumes these experiences as a referent to aesthetic judgment and the making of metaphors. Included in the below 5 sections are the 73 axioms extracted from the Ortony's *Metaphor and Thought* and my monographs which are possible referents to any reasoned aesthetic consideration as the warrant to an inference or the evidence of a specific claim. I have underlined the axioms for clarity. For example this work is a work of art because it is a generative metaphor. To reduce this size of this monograph I have deleted so many of the architectural examples as these might be found to be distracting from the aesthetic reasoning. The combination of all this monograph's axioms suggest inclusion rather exclusion of will, desire and appetite into the consideration of the metaphor as all art, as all architecture is, for all, to create, use, own and enjoy. While contemporary aesthetics may focus on perception by means of the senses, cognitive capacity in creation and perception informs conceptual metaphors and the two affect any one aesthetic experience, subject and individual. Transferring from previous experience is not always experiential but cognitive, where the only sense involved is the initial referent, a referent to a transfer where one talks in terms of another to make the strange familiar and find a commonality to both.

3. Metaphor and Representation [1] this section presupposes that metaphors are a linguistic phenomenon and that metaphors are somewhat “deviant” and need to be explained in terms of normal or literal uses of language, and that their main function is to provide an alternative linguistic mechanism for expressing ideas—a communicative function [1].

In his paintbrush as pump discussion as a metaphor *Schon* claims that by attaching to the paintbrush the way of a pump the researchers were able to better improve the design of the paintbrush as an instrument which pumps paint on the surface. By describing painting in an unfamiliar way they were able to make dominant what was already somewhat known. They then saw the brush as a pump. Before then they seemed to be different things now they were the same. To arrive at this conclusion they had to observe the working of the brush and make the observation and then apply it to the mechanism. The paintbrush was now seen as a pump and the act of painting, pumping. *Schon* refers to this a generative metaphor. [6]

The generative metaphor is the name for a process of symptoms of a particular kind of seeing-as, the “meta-pherein” or “carrying –over” of frames or perspectives from one domain of experience to another. This process he calls generative which many years earlier WJ Gordon called the Metaphoric Way of Knowing [7] and Paul Weiss [8] called “associations”.

In this sense both in interior design and architecture after assimilating the program the very first step in the design process is to develop a “parte” (An ex parte presentation is a communication directed to the merits or outcome of a proceeding ...it’s the resolution of the argument consisting of claims, inferences, evidence and warrants to the inference). It is a “top-down” [6] approach later followed by designs which meet the parte. The parte may follow the design process and be presented to sell the product.

Commercial retail shops maximize both visual and physical access to their merchandise by the use of glass and positioning entrances convenient to potential shoppers’ paths of travel. Attached or detached the idea of the shop as a flickering flame and welcoming transformed shops prior image as formidable container into which one ventured for surprise and possible revelation. With this in mind designers of malls extend this accessibility to nodes on highways to be close to their prime markets. Commercial retail is now perceived as an attractive recreational experience and as such provides shoppers with a secondary perception of the metaphor; shoppers now “carry-over” from play, rest and relaxation to fulfilling their needs and necessities.

On the other hand a dead metaphor is one which really does not contain any fresh metaphor insofar as it does not really “get thoughts across”; “language seems rather to help one person to construct out of his own stock of mental stuff something like a replica, or copy, of someone’s else’s thoughts”. [9]

The landscape is replete with an infinite number of *inane replicas* which render readers dull, passive and disinterested (How many times will you read the same book?) Mass housing, commercial office buildings and highways are the main offenders leaving the owner designed and built residence, office, factory, fire station, pump house, as unique and delightful relief’s in an otherwise homogenized context. The reader stops reading because it is the same as before. Not reading the copy yet seeing the copy and the

collective of copies focuses rather on the collective as the metaphor as the overall project which also may be “dead”.

In its time, Levittown’s uniqueness and the sub-structures sameness were its’ metaphor. It was alive and today still lives as new residents remodel upgrade and exhume their “dead” to become a “living” metaphor.

Disregarding this, the architects of public housing created dead metaphors and blamed the lack of pride of ownership for their failure. In revitalization teams of revivalist have discovered there is more than turf and proprietorship. Peculiarization, personalization and authentication are required for a metaphor to live. In this is the art of making metaphors for the architect of public works.

Defining the operation of metaphor Reddy says that “a conduit is a minor framework which overlooks words as containers and allows ideas and feelings to flow, unfettered and completely disembodied, into a kind of ambient space between human heads. There are also individual pipes which allow mental content to escape into, or enter from, this ambient space. Thoughts and feelings are reified into an external “idea space” and where thoughts and feelings are reified in this external space, so that they exist independent of any need for living human beings to think or feel them”. This most closely resembles works of architecture and what goes inside and outside works. “Somewhere we are peripherally aware that words do not really have insides (“it is quit foreign to common sense to think of words as having “insides”major version of the metaphoric which thoughts and emotions are always contained in something”)

That conduit [9] is the dominant theme that unites all the Tyrolean villages. Interior decoration in the Bronx and Brooklyn in the middle of the twentieth century was dominated by wall to wall drapes, cornices, valences, upholstered furniture covered with slip covers, ketch and bric-a-brac figures and “charkas” known affectionately as “Bronx Renaissance”.

The conduit that connected these outcomes were a system of city-wide gift stores, national gift market, central fabric suppliers and workshops and the heroic drapery hangers (of which I was one) completed their work. Conduit is the parte and design system from which choices in structure, finishes, colors, textures, etc. follow.

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“It's a strange thought, that culture is a product of man-made, unnatural things, that instead of culture shaping the architecture, it is the architecture (the environment) that shapes the culture. I would guess it makes sense after some x amount of years....maybe its in cycles: At first, culture creates the architecture, x years pass by, and then the architecture-environment modifies the culture. Then new modified culture creates new architecture, etc. [10]

(2): But then if we only build steel, glass structures, wouldn't we suffer from the glass metropolis in the future, when another form or material is introduced to replace steel, concrete and glass?” [10]

The affect of the metaphor on other metaphors with all its links and consequences is manifest in the conduit which leads to one after the other and a continuation of the first.

An example of novel images and image metaphors is Andre Breton's “My wife.....whose waist is an hourglass” explains.....”By mapping the structure of one domain onto the structure of another”, [11] “This is a superimposition of the image of an hour glass onto the image of a woman's waist by virtue of their common shape. As before the metaphor is conceptual; it is not the works themselves, but the metal images. Here, we have the mental image of an hour glass and of a woman and we map the middle of the hourglass into the waist of the woman. The words are prompts for us to map from one conventional image to another”. Lakoff concludes that “ all metaphors are invariant with respect to their cognitive topology, that is, each metaphorical mapping preserves image-schema structure.” Likewise when we look at the geometrical formal parts of an architectural metaphor we note those common elements where fit, coupling and joints occur. We remember that which exemplified the analogous match. [11]

This observation of the metaphor finds that the commonality, commonplace and similarity are the chief focus of the metaphor. As Frank Lloyd Wright designed his Prairie architecture with dominant horizontal axis thrust to his structure as common to the horizontal axis of the land upon which the building sits. Thus the two horizontal axes, the land and then the building were wed by their commonality of horizontality.

According to Lakoff plausible accounts rather than scientific results is why we have conventional metaphors and why conceptual systems contain one set of metaphorical mappings than another.

An architectural work establishes its own vocabulary which once comprehended become the way in which we experience the work, finding its discrepancies and fits and seeking the first and all the other similar elements. We do judge the work as to have Consistency, integrity and aesthetics. Buildings which do not have these characteristics do not work as metaphors. [11]

The relevance of studying architecture as the making of metaphors is to provide practitioners, owners, and mainly those that shape the built environment that they have a somber and serious responsibility to fill our world with meaning and significance, That what they do matters as in this first of Layoff's results (Please note the application of Layoff's vocabulary, definitions and descriptions related to linguistics metaphorically applied to architecture).

Metaphor is the main mechanism through which we comprehend abstract concepts and perform abstract reasoning. For example, as this is so for linguistics (spoken or written), then I infer that it must be true for non-linguistics, and I give as evidence the built habitats and their architectural antecedents, being as how what is built is first thought and conceived separately from building as thinking and conceiving is separate from the outward expression, whether it is one or thousands, public cultures is influenced, bound and authenticated by its' metaphors. Notwithstanding "idolatry", the metaphors are the contexts of life's dramas. As our physical bodies are read by our neighbors, finding evidence for inferences about social, political and philosophical claims about our culture and its place in the universe is a metaphorical act.

Subject matter, from the most mundane to the most abstruse scientific theories, can only be comprehended via metaphor. [11] Much subject matter, from the most mundane to the most abstruse scientific theories, can only be comprehended via metaphor where metaphor is fundamentally conceptual, not linguistic, in nature [11].

After many years living in Saudi Arabia and Europe and away from Brooklyn I visited Park Slope. I saw the stoops ascending to their second floors, the carved wood and glass doors, the iron grilles, the four story walls, the cementous surrounded and conventionally pained widows but what I saw was only what I described. I did not recognize what it was; it was all unfamiliar like a cardboard stage setting. I did not have a link to their context nor the scenarios of usage and the complex culture they represented. I neither owned nor personalized what I was seeing. All of this came to me without language but a feeling of anomie for what I was seeing and me in their presence, years later I enthusiastically escorted my Saudi colleagues thorough Washington, DC's Georgetown showing them the immaculately maintained townhouses. I was full of joy, perceptually excited but my colleagues laughed and were totally disinterested. These were not their metaphors and they could hardly wait to leave the area to find a good Persian restaurant to have dinner. They, like my self years before did not see what I saw and more relevantly did not "get-the-concept". Both of the above anti-metaphor cases were conceptualized without words as would be positive cases of metaphor. Aesthetics must be familiar to be perceived; metaphors make the strange familiar. [7].

Metaphorical language is a surface manifestation of conceptual metaphor. [11] As language is to speech so are buildings to architecture where each has a content and inner meaning of the whole as well as each of its parts. As each word, each attachment, plain, material, structure had first been conceived to achieve some purpose and fill some need. Hidden from the reader is the inner psychology, social background, etc of the man when speaking and the programming design and contacting process from the reader of a building metaphor. As in completing an argument the reader perceives the inferences with its warrants and connects the evidence of the seen to the claims to make the resolution of the whole, all of which are surmised from the surface.

Through much of our conceptual system is metaphorical; a significant part of it is non-metaphorical. Metaphorical understanding is grounded in non-metaphorical understanding. [11] The science of the strength of materials, mathematics, structures, indeterminate beams, truss design, mechanical systems, electricity, lighting, etc. are each understood metaphorically and there precepts applied metaphorically but often random selections, trails and feasibility are random and rather in search of the metaphor with out knowing it is or not a metaphor and fit to be part of the metaphor at hand. On the other hand we may select on or another based on non-metaphorical, empirical test and descriptions of properties. We then try to understand the metaphor in the selection, its commonality, how it contributes to the new application, how its has properties within itself which are alone strange and unrelated yet when couple with the whole or part of the created metaphor contribute to metaphor. Aesthetic judgments are affected by sense we have of both the technical and conceptual aspects of the metaphor.

Metaphor allows us to understand a relatively abstract or inherently unstructured subject matter in terms of a more concrete or at least more highly structured subject matter [11]. Owner occupied specialized works of architectural metaphors may begin with long periods of research, observations, and analysis ; conclusions and redesign and re-thinking of existing or utility of new systems; setting our system feasibility, pricing and meeting budgets, palling and programming, diagramming and design of sub systems and systems but when complete the metaphor is accessible, usable and compatible.

The whole of the metaphor is designed in such a way as to clarify, orient and provide “concrete” reification of all the design parameters into a “highly structured” work, a work which homogenizes all these diverse and disjointed systems and operations into a well working machine. Building types such as pharmaceutical, petrochemical laboratories, data research centers, hospitals, space science centers, prisons, etc are such relatively abstract unstructured uses which only careful assembly can order. Faced with both housing and creating identity the Greeks and the Romans derived an Order of Architecture which we now call the Classical Order of Architecture. Long before the use of computers after faced with a complex way of teams of service clerks communicating on the phone, accessing and sharing files and instantly recording all transactions I invented a huge a round table where all clerks would be facing the center where would be sitting a kind of “Lazy Susan” . I choose the Lazy Suzan because of my experience in Chinese restaurants and selling Lazy Suzan’s as a young sales assistant in a gift store in

the Bronx. The aesthetics of this design were driven by an elegant accommodation to a complex function.

Like the onomatopoeic metaphors Lakoff's mappings of conceptions [11] override the overt spoken and descriptive and rely much more on Mnemonics (something intended to assist the memory, as a verse or formula). However, for Lakoff the assistance comes from something much more primordial (constituting a beginning; giving origin to something derived or developed; original; elementary: primordial forms of life) to the person's or societies experiences. This is the primary referent in aesthetic judgment and the ideal in the architectural program.

These become the matrix (encyclopedic) of schemas (in argument; the warrants {where a warrant is a license to make an inference and as such must have reader's agreement} supporting the inferences (mappings) where in the metaphor becomes real). In this way the reader maps, learns and personalizes the strange into the realm of the familiar. The reader does so by the myriad of synaptic connections he is able to apply to that source. Hence architects translate their architectural conception from philosophy, psychology, sociology, etc into two dimensional scaled drawings and then to real life full scale multi dimensions convention consisting of conventional materials, building elements (doors, windows, stairs, etc).

As maps are the result of cartographers rendering existing into a graphics for reading so is mapping to the reading of metaphors where the reader renders understanding from one source to another. Doing so mentally and producing a rendition of understanding (as a pen and ink of a figure) not as a graphic but a conceptual understanding.

Reader sees in a critical way the existing culling through and encyclopedia of referents to make the true relationship; the mapping which best renders the reality; the relationship which informs and clarifies as the map the location, configuration and characteristic of the reality. As the cartographer seeks lines, symbols and shadings to articulate the reality so the reader choices of heretofore unrelated and seemingly unrelated are found to have an essence common to both the reality and the rendition so that the metaphor can be repeated becoming the readers new vocabulary.

In fact architects do the opposite as graphic renditions are made of synapses between amorphous and seemingly desperate information. Yet the process of mapping is no less intense as architect review the matrix of conditions, operation, ideal and goals of the thesis to find similarities and differences, commonalities, and potential for one to resonate with another to make a "resolution" on the experience of a cognitive mapping which becomes the metaphor, part and overwhelming new reality. The new reality is the target of the source and finally can be read. In the case of the birth of an infant metaphor readers may find a wide variety of source information which is germane to their own experience.

Before the public ever sees the constructed metaphor Building Officials, manufacturers, city planners, owners, estimators, general contractors, specialty contractors, environmentalist, neighbors and community organization first read the drawings and map their observations to their issues to form a slanted version of the reality. Their mappings are based on the warrants which are their licensed to perform. Each warrant will support a different mapping (inference) and result in its own metaphor. In

effect each will see a kind of reality of the proposed in the perspective of their peculiar warrant, where license is permission from authority to do something. It is assumed if one gets permission it has met the conditions, operations, ideal and goals of the proposed metaphor.

Mapping is critical at this read to assure that the architect's rendering of the program is faithful to the cognitive, lawful, physical and legal realities. It is like a map which gets tested by scientist, navigators, pilots and engineers before they build a craft to use the map, or set out on a journey using the map. Before the contracts start committing men and material the metaphor must map and be the metaphor meeting all expectations. Before building, the suppliers, contractors and specialist make "shop drawings" to map the metaphor and present the graphic evidence that they can fill their claim to build for compensation. The architect's team now gathers reviews and coordinates all of these warrants to assure their mappings do not interfere, nullify but additively contribute to the reifying of the source to the target and build the final product, on time, on budget and within the allowed schedule.

After opening the public users have the opportunity to map any and all the information that is superficially available from the shell, to its nuts and bolts. Many enjoy reading the project while it is being constructed to read the work and conceptualize the final form from the bits and pieces they observe, mapping a single task to its final outcome and so forth. So the mapping of construction by onlookers, contractors is all part of the mapping process.

Like a landscape artist who gathers from the chaos of the nature into selected items to organize into the canvas so that the viewers will find what he saw and reconstruct so the architect and the user map their reality into a metaphor. In this way the conception of the map is the metaphor and what is made by the cartographer is a "graphic" to simplify the chaos to find the commonality. Sifting through the program the architect seeks the "commonality" between the reality and experience to make the metaphor. Mapping is only possible when we know the "commonplace", the commonality, the characteristic common to both, the terms that both the source and the target have in common that the mapping takes place.

As the architect structures his program, design and specifications he simultaneously structures the metaphor of his work of architecture. Architecture consists of program specifics where the conditions, operations, goals and ideals are from heretofore unrelated and distant contexts but are themselves metaphors "mapped across conceptual domains".

As the architectural program the mappings are asymmetric and partial. The only regular pattern is their irregularity, and, like a person can be read and understood, once one is familiar with the personality and character, vocabulary and references, and of course the context and situation of the work the work can also be read and understood. The regularity with which different languages employ the same metaphors, which often appear to be perceptually based, has led to the hypothesis that the mapping between conceptual domains corresponds to neural mappings in the brain.

Mapping is the systematic set of correspondences that exist between constituent elements of the source and the target domain. [11] Many elements of target concepts come from source domains and are not preexisting. To know a conceptual metaphor is to know the set of mappings that applies to a given source-target pairing.

The same idea of mapping between source and target is used to describe analogical reasoning and inferences; and is a fixed set of ontological (relating to essence or the nature of being) correspondences between entities in source domain and entities in target domain.

Examples:

Love Is a Journey

Life Is a Journey

Social Organizations Are Plants

Love Is War

Schemas [11] are the realms in which the mappings takes place much the same as the inferences in arguments have warrants and link evidence to claims so do these schemas, architects carry-over their experiences with materials, physics, art, culture, building codes, structures, plasticity, etc. to form metaphor. Identifying conditions, operations, ideals and goals are combined to form plans, sections and elevations which are then translated in to contract documents. Later the contractors map this metaphor based on their schemes of cost, schedule and quality control into schedules and control documents. It is not until equipment, laborers and materials are brought to the site that the metaphor starts to form. Once formed the only evidence for the user (reader) are the thousands of cues from every angle, outside and inside to enable use and understanding.

The latter half of each of these phrases invokes certain assumptions about concrete experience and requires the reader or listener to apply them to the preceding abstract concepts of love or organizing in order to understand the sentence in which the conceptual metaphor is used. Operationally, the work's entrance is the first clue about the sequence of experiences of the metaphor taking us to the anticipated lobby, then reception followed by sequences of increasingly private (non-communal) and remote areas until reaching the terminal destination.

The very size, context and location is couple with theme of parks, gated communities, skyscraper's roof tops and cladding becoming a metaphor. The very outer edges of a metaphor portend of its most hidden content.

Once we understand the metaphor and the mapping from the context to the form the mapping continues from entrance to the foyer and mapping from the context and cladding to every detail. We carry-over and map the metaphor as we delve deeper into its content and inner context always mapping the first to the current metaphor.

In linguistics and cognitive science, cognitive linguistics (CL) [11] refers to the school of linguistics that understands language creation, learning, and usage as best explained by reference to human cognition in general. It is characterized by adherence to three central positions. First, it denies that there is an autonomous linguistic faculty in the mind; second, it understands grammar in terms of conceptualization; and third, it claims that knowledge of language arises out of language use.

Therefore the metaphor of architecture is inherent not in the media of the building's presence, parts or bits and pieces but in the mind of the reader and that the articulation of the metaphor as thinking and third that our use of the metaphor increases our know ledge of the metaphor and reading metaphors comes out of practice. The more we view paintings, ballets, symphonies, poetry, and architecture the better we become at

their understanding and its metaphor further dwells in the reader while the building and its parts exist without being understood.

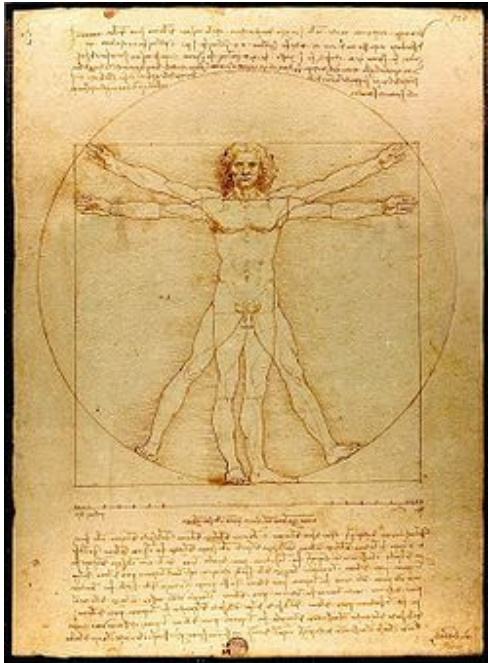
Extrapolating: the writer of the speech is as the architect and the speaker is as the reader of the metaphor where the metaphor can only be experienced to be understood.

Walk through an unlit city at night and feel the quiet of the building's voices because the readers have no visual information and with access to the closed buildings the metaphor is a potential with being a reality. Yet the potential for cognition does exist and is real but is not understood apart from its experience. Indeed, primary aesthetics information is received through the senses. (Arnold Berlant)

For example, humans interact with their environments based on their physical dimensions, capabilities and limits. [11] The field of anthropometrics (human measurement) has unanswered questions, but it's still true that human physical characteristics are fairly predictable and objectively measurable. Buildings scaled to human physical capabilities have steps, doorways, railings, work surfaces, seating, shelves, fixtures, walking distances, and other features that fit well to the average person.

Humans also interact with their environments based on their sensory capabilities. [11] The importance of the senses is discussed by Arnold Berlant in the fields of human perception systems, but like perceptual psychology and cognitive psychology, are not exact sciences, because human information processing is not a purely physical act, and because perception is affected by cultural factors, personal preferences, experiences, and expectations, so human scale in architecture can also describe buildings with sightlines, acoustic properties, task lighting, ambient lighting, and spatial grammar that fit well with human senses. However, one important caveat is that human perceptions are always going to be less predictable and less measurable than physical dimensions.

However, the scale of habitable metaphors is the intrinsic relation between the human figure and his surroundings as measured, proportioned and sensed. [11] It is dramatically represented by Da Vinci's *Vitruvian Man* (see below illustration) is based on the correlations of ideal human proportions with geometry described by the ancient Roman architect *Vitruvius*, representation of the human figure encircled by both a circumference encapsulating its feet to its outstretched fingertips where part is then encased in a square.



This **scale** is read in elevations, sections, plans, and whole and based realized in the limited and bound architectural space. These spaces and their variations of scale are where the reader perceives the architectural metaphors of compression, smallness, grandeur, pomposity, equipoise, balance, rest, dynamics, direction, static ness, etc. In his Glass House, Phillip Johnson extended that space to the surrounding nature, making the walls the grass and surrounding trees, St. Peter's interiors is a Piranesi space. (The Prisons Carceri d'invenzione or 'Imaginary Prisons'), is a series of 16 prints produced in first and second states that show enormous subterranean vaults with stairs and mighty machines.

Piranesi vision takes on a Kafkaesque and Escher-like distortion, seemingly erecting fantastic labyrinthian structures, epic in volume, but empty of purpose and human scale in this work and often human scale in architecture is deliberately violated [11] for monumental effect. Buildings, statues, and memorials are constructed in a scale larger than life as a social/cultural signal that the subject matter is also larger than life. An extreme example is the Statue of Liberty, the Washington Monument, etc.

Mappings are not arbitrary, but grounded in the body and in every day experience and knowledge. [11]. Mapping and making metaphors are synonymous, the person and not the work make the metaphor. Without the body and the experience of either the author or the reader nothing is being made. The thing does not but the persons have the experiences. As language, craft, and skills are learned by exercise, repetition and every day application so are mappings. Mappings are not subject to individual judgment or preference: but as a result of making seeking and finding the commonality by practice. Architects learn to associate, create and produce by years of education and practice while users have a longer history approaching and mapping for use and recognition.

Yet new metaphors are difficult to assimilate without daily use and familiarity. Often the owners of new building will provide its regular occupants with orientation, preliminary field trips and guided tours. Many buildings restrict users' access by receptionist, locked doors and restricted areas.

It is not hard to experience a built metaphor as it is an ordinary fixture on the landscape of our visual vocabulary. It has predictable, albeit peculiar and indigenous characteristics where the generic nature of the cues are anticipated.

A conceptual system contains thousands of conventional metaphorical mappings which form a highly structured subsystem of the conceptual system. [11] Over the year's society, cultures, families and individuals experience and store a plethora of mapping routines which are part of our mapping vocabulary. As a potential user when encountering a new building type such as a hi-tech manufacturing center we call upon our highly structured subsystem to find conceptual systems which will work to navigate this particular event. Another example is as a westerner encountering a Saudi Arab home which divides the family from the public areas of the house as private. In the high tech building doors will not open and corridors divert visitors away from sensitive and secret areas. In the Arab home the visitor is kept in area meant only for non-family members and where the females may not be seen. There is a common conventional metaphorical mapping which uses a highly structured subsystem of the conceptual system. There is a similarity and an ability to accept and the constraints. The metaphor or the work of architecture includes each and every nut and bolt, plane and volumes, space and fascia, vent and blower, beam and slab, each with their mappings parallel to operational sequences, flows representations, openings and enclosures so that they operate in tandem and compliment one another. The conventions come from the experiences of doors that open, elevators that work, stairs that are strong, floors that bear our weight, buildings that don't topple, and basic experiences that prove verticality, horizontality, diagonals, weights of gravity, etc.

There are two types of mappings: conceptual mappings and image mappings; both obey the Invariance Principle. [11] "*Image metaphors* are not exact "look-alikes";[11] many sensory mechanisms are at work which can be characterized by Langacker's *focal adjustment* (selection, perspective, and abstraction); images and Image-schemas are continuous; an image can be abstracted/schematized to various degrees; and *image metaphors* and *conceptual metaphors* are continuous; conceptual metaphorical mapping preserves image-schematic structure (Lakoff 1990) and image metaphors often involve conceptual aspects of the source image. ("All metaphors are invariant with respect to their cognitive topology, that is, each metaphorical mapping preserves image-schema structure").

Likewise when we look at the geometrical formal parts of an architectural metaphor we note those common elements where fitting, coupling and joints occur), again this simultaneity of ideas and image operating in tandem where we see and know an idea simultaneously; where the convention of the architectural space and the metaphor of the conception converge.

Image mappings in architecture finds schemes from a repertoire of superficial conventions except in a Japanese or Arab house where we are asked to sit on the floor or eat without knives and forks or find no room with identifiable modality of uses, or a palace with only show rooms where living is behind concealed walls.

In cognitive linguistics, the invariance principle [11] is a simple attempt to explain similarities and differences between how an idea is understood in "ordinary" usage, and how it is understood when used as a conceptual metaphor. [11]

The invariance principle offers the hypothesis that metaphor only maps components of meaning from the source language that remain coherent in the target context. [11] The components of meaning that remain coherent in the target context retain their "basic structure" in some sense, so this is a form of invariance.

Architecturally, users encounter a habitable metaphor with their experience engrafted in a particular mapping inherent in their catalog of mappings. This mapping has its own language, vocabulary say of the way doors, windows floors, stairs and rooms names work and the user brings this vocabulary into, the target metaphor, say a new office building. Of course there will be all sorts of incongruities, similarities and differences. However this principle points out that the office building vocabulary will retain its basic structure.

This means that while the vocabulary the user brings to the target from the source will be unchanged still keeping the images of doors, windows, etc as they were in the residential the office will be unchanged and unaffected. For example when an architect designs a bank from his source in the size, décor and detail of medieval great hall the target of banking with all its vocabulary of teller windows, manager's carols, customer's areas, vaults, etc will not change into medieval ways of serving, storing and managing the business.

When I designed a precinct police station for Bedford Stuyvesant I brought the community, park and community services onto the street and public pedestrian sidewalks while housing the police offices, muster and patrol functions to the back and under the building. While the building metaphor is now a community service police station mapping components of meaning from the source language of user and community friendly, human scale, public access and service which remained in the target police station. Yet, the traditional vocabulary of all the police functions remained coherent, perceived and understood.

Our system of conventional metaphor is "alive" in the same sense that our system of grammatical and phonological (distribution and patterning of speech sounds in a language and of the tacit rules governing pronunciation.) rules is alive; namely it is constantly in use, automatically, and below the level of consciousness and Our metaphor system is central to our understanding of experience and to the way we act on that understanding. [11]

For example, onomatopoeics are metaphors and can be onomatopoeic (grouping of words that imitates the sound it is describing, suggesting its source object, such as "click", "bunk", "clang", "buzz", "bang", or animal noises such as "oink", "moo", or "meow") ? In this case an assemblage instead of a sound. As a non-linguistic it has impact beyond words and is still a metaphor. [11]. Then a metaphor is much more than the sum of its parts and is beyond any of its constituent constructions, parts and systems, its very existence a metaphor. In both his books on Emphatics and Surrogates Dr. Paul Weiss amplified this theory. [16]

Elegant architectural metaphors are those in which the big idea and the smallest of details echo and reinforce one another. [17]. Contemporary architects wrapping their parts in "green", "myths" and eclectic images" are no less guilty than was their predecessors of the Bauhaus exuding asymmetry, tension and dissonance as were the classics and renaissance insisting on unity, symmetry and balance.

Both the architects' and the public could not help but know the rules and seek confirmation from one end to the other. The architect's part and the user's grasp of cliché part were expected and easy "fill-in" proving the learned mappings, learned inference trail and familiarity with bridging.

Filling in where people ascertain the deep metaphor that underlies one or more surface metaphors by filling in terms of an implicitly analogy". [17]

It is the "filling in" wherein the synapse (a region where nerve impulses are transmitted and received, encompassing the axon terminal of a neuron that releases neurotransmitters in response to an impulse) takes place.

Synapse is metaphor where two are joined together as the side-by-side association of homologous paternal and maternal chromosomes during the first prophase of meiosis. [17] How this happens is as biblical as: "faith is the substance of things hoped for, the **evidence** of things not seen" where our mental associations are themselves the metaphor, the evidence of the works we do not actually see. We see the metaphor, we read its extent, we synapse, analogies and metaphorize absorbing its information, contextualizing and as much as possible and resurrecting its reasons for creation. The architectural metaphor only speaks through its apparent shape, form, volume, space, material, etc that the concepts which underlie each are known to the user as they would to a painting, poem, or concerto.

Observation, analysis and use fill in the gaps users inference the locations of concealed rooms, passages and supports, the user infers from a typology of the type a warehouse of expectations and similes to this metaphor from others. In this way there are the perceived and the representations they perceive represents which when explored, inert what we call beautiful, pleasurable and wonderful. [17]

So while architecture is the making of metaphors and architects are making metaphors their works, though metaphoric, are not themselves the metaphors but the shadow of the metaphor which exists elsewhere in the minds of both the creator and the user [17]. Architects would not be known as artist nor should their works be known as works of art. Both their works are the "deep" while the readers deal with the "surface"; the true architectural artisan has deep and underlying metaphors predicated two and three dimensional space analysis, history, culture, class, anthropology, geography etc. They all are often underlying the surface of the choices of lighting, material, claddings, etc. Vigorous aesthetic analysis would consider all of these axioms to realize the full enjoyment of the information contained in the work.

Spatial representation in which local subspaces can be mapped into points of higher-order hyper-spaces and vice versa and that is possible because they have a common set of dimensions. [17] In these hyper-spaces many architectural elements are fitted and combine to make a unity. It can be argued that the seen is not at all the metaphor but the transfers, bridges and connections being made apart from the building. In filling in the terms of the analogy lies the metaphor.

4 Metaphor and Understanding is about comprehension, perception and impressions affects on metaphor

Metaphor is used, understood, misused and misunderstood due to the inconsistencies, lack of derivatives and many unexplained changes in linguistics [18].

Likewise, the street talk that permeated my childhood was a string of “sayings, clichés, proverbs and European linguistic slang. This was contrasted by the poetry of songs and medieval literature. The architecture was the only source of my identity having consistency, reputation and allusions toward science, logic and consequence. I just know there was something out side of this circus. Although I could not derive what I saw I could document and retain the types and details of each type.

However, Sadock’s examples and apologies only remind me that my work to derive the phenomenon of architecture as the making of metaphors is in its’ infancy, beginning to develop a vocabulary and understanding for the architectural profession and its’ allies.

Difference between the indirect uses of metaphor versed the direct use of language to explain the world. [18] In some circles this is referred to tangential thinking, that approaching a subject from its edges without getting to the point. Users can accept works which are vague, inane, and non-descript, evasive, and disorienting. Public housing, “ticky-tack” subdivisions, anonymous canyons of plain vanilla towers with countless nameless windows, offices with a sea of desks, nameless workstations and the daunting boredom of straight highways on a desert plain. This too applies to works of architecture which assembles a minimum and constructs the minimum in a stoic fashion considering the least needed to produce a work that fills the minimum economy of its commission. As such many architectural works escape the many and various realities settling for a minimum of expression of and otherwise prolific potential.

There is a distinction and relationships between micro and macro metaphors and the way they can inform one another as the form of design may refer to its program, or a connector may reflect the concept of articulation as a design concept. [18].

The way one 45 degree angle may reflect all the buildings geometry. More the way the design concept, design vision drawn on a napkin can be the vision, gestalt, formulae, and “grand design” of a particular project. Such an ideal can be the seed, fountainhead and rudder guiding all other design decisions.

The macro metaphor drives the micro while they both inform one another. Classic, Egyptian, Greek, Roman, Empire, Bedemier, Renaissance, Modern, Baroque, Rocco, Gothic, Tudor, etc are examples of styles and periods where a macro design imperative controlled micro decisions. And, vice versa, where construction means and methods determined certain design and style as the flying buttress and buttress of the Gothic’s, the arch for the Romans.

The renaissance not only was informed by discoveries of the Roman classics but by the intellectual and spiritual exuberance so well exuded in music, art and sculpture and in architecture by the eccentric articulation of figure and bugling in pediments, capitals and form of the plans and sections.

Likewise the macro Bauhaus and its principles doggedly produced the architecture of Mies, Johnson, Breuer, Corbusier, Gropius, and Meier turning away from fanciful experimentation, and turned toward rational, functional, sometimes standardized building. In a lesser way the design vernacular of Frank Lloyd Wright was a macro design approach from which micro design of particular spaces, details and decoration.

Metaphors work by “reference to analogies that are known to relate to the two domains” [19]. In other words there is apriori knowledge of these before they are spoken and when heard they are immediately found. Like a building metaphor’s common elements with an uncommon application, the common connects to the unfamiliar and the architect is able to find a way to bring them together and the user discovers their relevance.

“Whenever we talk about the metaphorical meaning of a word, expression, or sentence, we are talking about what a speaker might utter it to mean, in a way it that departs from what the word, expression or sentence actually means”. [20] A problem of the metaphor concerns the relations between the word and sentence meaning, on the one hand, and speaker’s meaning or utterance meaning, on the other”

With the exception of major corporate brands, churches, specialty building in architecture the examples is in infinite as most works designed are with no intended message, meaning or referent. Many are in the class of others of its types and generally convey their class while others are replicas and based on a model. Furthermore most architects have a design vocabulary which is foreign to the user. Conversely, in public buildings, the user’s expectations, use and expectations are foreign to the architect. At its best the architect may connect the vocabulary of his design to some exotic design theory which, results I a very beautiful and appealing building to which the user finds beautiful but has no idea about the intended making of the whole or its parts. But some how it works!

After formulating a program of building requirements and getting agreement that the words and diagrams are approved by the client. If the architect built-work can meet this program and come to be the building the client intended is such an example of the work of architecture as a metaphor and metaphorical work. (They carry-over, bridge, and are each others advocate)

Limited to meeting the program and the fulfilling the design contract says nothing about the unintended consequences of the building on the context and the way the metaphor outcome impacts for users, community and the general public. In some ways this is the job of municipal Departments of Community Services, town fathers, zoning boards and building departments and their building codes.

All contribute to honing the metaphors and their outcomes which is this relationship of intended words to spoken words and the chasm between the two. We are told to think before we speak, picture what you are going to say then speak, still whatever we speak, in tone, emphasis, timing(meter) and pitch can carry its own meanings; this was also one of the final fields of investigation for my late mentor, Dr. Paul Weiss.

A theory of metaphor should state the principles which relate literal sentence meaning to metaphorical utterance meaning. [20] In like manner the architect tries to find a way that program relates to design and design the final product.

A good example of unappreciated excellent metaphors is the cases of the many non-New Yorkers who visit and find no interest in the buildings.

Whereas its' natives have the language, vocabulary and years of incremental experience to know both the words and the metaphors of each and the collective of building –types. [20]

The basic principle of an expression with its literal meaning and corresponding truth conditions can, in various ways that are specific to the metaphor, call to mind another meaning and corresponding set of truths” In other words:” how does one thing remind us of another”. [20]

Without apparent rhyme or reason metaphors of all arts have a way of recalling other metaphors of other times and places. In my mind I recall Brooklyn brick warehouses on Atlantic Ave. with turn of the century Ford trucks and men adorned in vests, white shirts and bow ties loading packages from those loading docks under large green metal canopies. The streets are cobble stones.

In the case of building metaphors it is the familiarity with not only the building-type, materials, context and convention but the architects, contractor's and owner's personas which increase the understanding of the metaphor. In the case of Dubai and other such contexts it is the lack of such familiarity and tolerance for the strange that makes the metaphor acceptable on face value. The metaphor is accepted yet not understood. As many beautiful things they are awesome, forbidding, and indicative of some greater condition as being a stranger in one's own context. Buildings are perceived as cars manufactured by some idioms indicative of their species with little conscious relevance to the user's context. It is very strange. Building designed for people who before (and even current) this generation found tents to be their habitat metaphor.

Human cognition is fundamentally shaped by various processes of figuration”. “The ease with which many figurative utterances are comprehended has often been attributed to the constraining influence of the context”Including “the common ground of knowledge, beliefs, and attitudes recognized as being shared by *speakers* and *listeners* (architects and users (clients, public) [21] As it is with *speakers* architects, designers and makers “can't help but employ *tropes* in every day conversation (design) because they conceptualize (design) much of their experience through the figurative schemes of metaphor (design). Explaining tropes (turn, twist, conceptual guises, and figurations). It explains the standard and traditional building types found in various contexts as the chalet in the Alps and the specific style of each found in each of the Alps' counties and villages, etc. Psychological processes in metaphor comprehension and memory by Alan Paivio and Mary Walsh say that Susanne Langer writes that:” Metaphor is our most striking evidence of abstract seeing, of the power the human mind to use presentational symbols”. [21]

At each moment in its use the metaphor may mean different things, least of which may be any intended by its authors [22]. “A metaphor involves a nonliteral use of language”. A non-literal use of language means that what is said is for affect and not for specificity. A habitable metaphor is not meant for the user to fully, continuously and forever recall all that went into its production.

The fact that the roof silhouette was to emulate a belvedere in Florence, windows from a palace in Siena, and stucco from Tyrol is lost over time. Even, the design principles so astutely applied by the likes of Paul Rudolph, Richard Meier, or Marcel Breuer may be unnoticed in favor of other internal focuses.

These many design considerations may be the metaphor that gave the project its gestalt that enabled the preparation of the documents that in turn were faithfully interpreted by skilled contactors and craftsman. Yet at each turn it is the affect of metaphor and not necessarily its specifics that make a good design not a great work of architecture or a working metaphor. Yet, we distinguish the aesthetics of one verse the other.

Metaphor is an abbreviated simile to appreciate similarities and analogies which is called “appreciation” [23].

In psychology “appreciation” (Herbert (1898)) was a general term for those mental process whereby an attached experience is brought into relation with an already acquired and familiar conceptual system. (Encoding, mapping, categorizing, inference, assimilation and accommodation, attribution, etc). [23]

Likewise aesthetics’ view of beauty is not based on innate qualities, but rather on cultural specifics and individual interpretations. Miller explains how reading metaphors build an image in the mind. That is to say we “appreciate” what we already know. I have always contended that we do not learn anything we already do not know. We learn in terms of already established knowledge and concepts. We converse reiterating what we presume the other knows, otherwise the other party would not understand. The other party understands only because he already knows.

The architect who assembles thousands of bits of information, resifts and converts form words to graphics and specification documents communicates the new proposed (the strange new thing) in terms of the known and familiar. The first recipients are the owner, building officials; contractors must read seeking confirmations of known and confirm its adherence to expectations. After its construction the users read familiar signs, apparatus, spaces, volumes, shapes and forms. The bridge carries over from one to another what is already known. Even the strange that becomes familiar are both known but not in the current relationship. For example when we apply a technology used on ships to a building or a room which is commonly associated with tombs as a bank, etc. Both are generally known but not in that specific context. We could not appreciate it if it were not known. It is what Weiss calls commonalties and is the selection between commonalties and differences that makes a metaphor. About understanding and discerning between what is “true in fact” and “true in the model” Miller says: Metaphors are, on a literal interpretation, incongruous, if not actually false—a robust sense of what is germane to the context and what is “true in fact” is necessary for the recognition of a metaphor, and hence general knowledge must be available to the reader (user, public). “We try to make the world that the author is asking us to imagine resemble the real world (as we know it) in as many respects as possible. Offices, bedrooms, lobbies, toilets, kitchens are such models which are built to specific situations in images of yet some other context. We know one from the other from the perception of the smallest detail to the overall layout.

By analogy what Miller distinguishes between what the architect designed and what he thought are different. The architects of the Renaissance tried to resurrect the grandeur of the classic building they discovered and resurrected. The contemporary architect faces a vernacular of design principles which are reified in to conventional building types. The convention is the model whiles the specific application in the strange. Often new buildings are likened to the first model or the prototype. The reader knows the building type and is able to recognize the new version. [23]

“A metaphor may be regarded as a compressed simile, the comparison implied in the former being explicit in the latter. In the making the comparison explicit is the work of the designer and reader”. [23]

Three steps to understand metaphors

- *recognition,*
- *reconstruction, and*
- *interpretation,*

In principle, the above three steps must be taken in understanding metaphors, although the simplest instance the processing may occur so rapidly that all three blend into a single mental act.” When we face a new metaphor (building) a new context with its own vocabulary is presented, one which the creator must find and connect and the other which the reader must read and transfer from previous experience. [23] This would not be like the Aesthetic Movement which argued that art was not supposed to be utilitarian or useful in any practical sense. Instead, aesthetic experience is a fully autonomous and independent aspect of a human life. Thus, they argue, art should exist solely for its own sake. Yet the combination of all this monographs axioms suggest inclusion rather exclusion of will, desire and appetite into the consideration of the metaphor as all art, as all architecture is, for all, to create, use, own and enjoy. While contemporary aesthetics may focus on perception by means of the senses cognitive capacity in creation and perception informs conceptual metaphors and the two affect any one aesthetic experience, subject and individual. Transferring from previous experience is not always experiential but cognitive, where the only sense involved is the initial referent, a referent to a transfer where one talks in terms of another to make the strange familiar and find a commonality to both.

Prototype theory is a mode of graded categorization in cognitive science, where some members of a category are more central than others. [24] For example, when asked to give an example of the concept furniture, chair is more frequently cited than, say, stool.” I asked a New Yorker to give an example of an office building and they answered the Empire State Building it would be because of its height, and reputation, In fact the office building and not the “church” building shape has come to be a metaphor of the city. New York is an office building city. I can see only a flash glimpse and I will know it is Manhattan. [24]

Their metaphor “cigarettes are time bombs” cigarettes are assigned to a category of time bombs, what the time bomb being a prototypical example of the set of things which can abruptly cause serious damage at some point in the future.” [24]

It is for this reason that the landscape is filled with many metaphoric topics (applications) based on few metaphor vehicles (building types) not only true in functions and goals but also in characteristic building systems and structures.

Office (metaphor topic) Building (metaphor vehicle) metaphor topic as a house may be a hotel, grand estate, small or large private residence depends on the predicate. Carried with each are also, social, psychological, political and geographic inferences [24].

“Metaphors are generally used to describe something new by references to something familiar (Black, 1962b), not just in conversation, but in such diverse areas as science and psychotherapy. Metaphors are not just nice, they are necessary. They are necessary for casting abstract concepts in terms of the apprehendable, as we do, for example, when we metaphorically extend spatial concepts and spatial terms to the realms of temporal concepts and temporal terms. [24] When an architect creates a metaphor it is a building which takes on the attributes of all buildings and if it is work of art, as a building metaphor it takes on the attributes of the buildings which are more than a tin box but a statement of complex ideas which demands reading and is an opportunity to be read. We may say the building has aesthetics, is aesthetically pleasing or fits the aesthetic of iconic high-rise buildings. How does one know it is an “office building”?

1. It is located in the neighborhood of other office buildings
 2. It does not have balconies and curtains in the windows,
 3. It has an open and wide public plaza and unrestricted wide openings
 4. Its glazing, cladding and skin are high tech, impersonal and large scale.
- In adaptive use buildings where office are housed in residential and residential are house in office buildings precisely the metaphor topic and the metaphor vehicle are purposefully confuses the metaphor its unique identity.

5. Metaphor and Science focuses on objective experience of metaphor

Architectural making of metaphors is a matter of mapping, diagramming and combining to conclude the validity of combining and matching unlike materials, shapes, & systems. In this way any one of the metaphors and the whole system of bridging and carrying over is metaphoric. [25]

If one maps a rectangle and circle to a third you get a part square part circular odd shape. Map cold and hot and you get warm; map hotel, office, residential and shops and you get mixed use. [25] The alchemists describe a system of triangulation I taught and applied at Pratt Institute which is as: “Metals were often held to consist of two components: mercury, which was fiery, active and male, and sulphur, which was watery, passive and female. Thus the combination of the two metals could be viewed as a marriage. Metals and other minerals were often compared with heavenly bodies and their properties triangulated to produce a third. Not to let this arbitrary characterizations blemish the structure of this system it is valid to triangulate and in fact produce a metaphor where you find the property they both share.

Renaissance European cities beguile their metaphor with such combinations known by their scale, cladding, décor, and entrees. Particularly charming are the German “guest houses (“gast hofs”), English family pubs, etc. New Towns and contemporary town centers are mixed use, multi zoned urban cores. It isn’t the referent where one is the other but where there is a similarity between like features of two things, on which a comparison may be based: the analogy between the heart and a pump.

The commonality is apparent. They both share a similar characteristic. The hotel, residence, office and shop are joined by their convenience to that provide service to clients and their use of rooms, and a core of service, mountainous and housekeeping and supply. A small staff can support these businesses and there customers are compatible [25].

They all have a front of the house and back-of-the -house function (garbage, deliveries, maintenance, etc) in many cities lacks zoning regulations have allowed such mixed uses zones to still exist to day. Seeing these metaphors is a part of the fabric and character of neighborhoods. [25]

Metaphor is reasoning using abstract characters whereas reason by analogy is a straight forward extension of its use in commonplace reasoning. [25]

All this to say and as if there was a choice that architects have a choice where to make a new building by analogy or by metaphor. Analogies may be the ticky-tacks, office building, church, school building, fire station analogies to a first model verses an abstraction of a program into a new prototype. Is the analogy any less a work of architecture? Or do we only mean that works of architecture are works of art when they make abstractions?

“In processing analogy, people implicitly focus on certain kinds of commonalities and ignore others”. [25] In my New Haven drafting service, builders would give me a floor plan for me to redraft to build a new house: they simply wanted an analogy to the first with no changes. The Florida School Board uses and reuses both firms and plans to design new high schools based on plans used before to build other schools with only slight modifications to make them site-specific. This is design by analogy. Many design professionals use standard details and standard specifications relying upon analogy to design a new building. The overall may be either metaphor or analogous. Whole professional practices are formulated and bases on one or the other practices. Noting these things an industry was created called the “housing industry” churning out analogies rather than individual metaphors, leaving the metaphor to the context or theme of the development. It is famous architects who are mostly famous because they made metaphors and from them analogies were drawn. The analogous phenomenon has resulted in the nineteenth century Sears offering pre-designed and package barns ready to ship from Wisconsin to any where by mail order. Pre-engineered metal being and manufactured homes are all part of the analogous scheme of reasoning the built environment. Users have access to either and are able to shift perceptions. In commonplace users wanting to be fed by metaphorical architecture go to Disney, European, or urban entertainment and recreation centers. Las Vegas thrives on what I call “metaphoric analogies” abstractions of analogous building types. It is that synapse which attracts and beguiles the visitor hungry for authenticity and reality. Living in analogous urban replicas city dweller migrated to the suburbs in search of the metaphor of “a man’s home is his castle”. Today this metaphor has become an analogy as the metaphor proliferates and analogies from one to another state and country. We may be told a “*cell is like a factory*” which gives us a framework for analogy and similarity. [25]

An analogy is a kind of *highly selective similarity where we focus on certain commonalities and ignore others. The commonality is no that they are both built out of bricks but that they both take in resources to operate and to generate their products.* [25]

As users, design professionals begin their design process by finding analogies from extent projects as user faced with the building resort to their own vocabulary. Both do not favor one or the other and vacillate between the two for what they can learn.

“The central idea is that an analogy is a mapping of knowledge from one domain (the base) into another (the target) such that a system of relations that holds among the base objects also holds among the target objects”. On the user’s side in interpreting an analogy, people seek to put objects of the base in one-to-one correspondence with the objects of the targets as to obtain the maximum structural match”. [25] Aside from the cerebral appreciation of a work of art there is the appreciation which comes from the senses which is separate from knowledge yet rooted in experiences of like and unlike things? Such matching only focuses the interpretation and links the conceptual with the technical metaphor.

The corresponding objects in the base and target need not resemble each other; rather object correspondences are determined by the like roles in the matching relational structures.” [25] Cushions for seats, carpets for flooring, stretched fabric for walls and roof. cable for beams and columns, etc.

“Thus, an analogy is a way of aligning and focusing on rational commonalities independently of the objects in which those relationships are embedded.” [25] However, there may be metaphors at work as well as the user reads the tent’s tension cable structure, banners and the entire assemblage in a “romantic” eclectic image of Arabness, metaphors beyond the imperial but of the realm of the abstract and inaccurate. [25]

“Central to the mapping process is the principle of “systematicity: people prefer to map systems of predicates favored by higher-order relations with inferential import (the Arab tent), rather than to map isolated predicates. The systematicity principle reflects a tacit preference for coherence and inferential power in interpreting analogy”. [25] Arab tentness and “home-sweet-home” map basics from the “home-sweet-home” to the Arabness to make all the bits and pieces be understood.

Thus architects choose building elements from catalogs and in the most metaphoric circumstances designs elements from scratch. Metaphor buildings may or may not be composed of metaphoric elements. Metaphors and buildings which are analogies may of or may not have elements designed metaphorically. However, it is less likely that an analogues design will contain metaphorical elements. [25]

“No extraneous associations: Only commonalities strengthen an analogy. Further relations and associations between the base and target- for example, thematic consecutions- do not contribute to the analogy”, analogous matching looks for duplicates, replicas and like elements; the more the better. Most contemporary commercial design relies on many commonalities hence CAD, design format programs, etc assume commonalities in and analogies. After choosing title system the rest follows as repetition as before. Many commercial house plans, office plans, department store, etc are designed as analogous design schemes. [25]

“Interaction view” of metaphor, where metaphors work by applying to the principle (literal) subject of the metaphor a system of “associated implications” characteristic of the metaphorical secondary subject. These implications are typically provided by the received “commonplaces” (ordinary; undistinguished or uninteresting; without individuality: a commonplace person.) About the secondary subject ‘The success of the metaphor rests on its success in conveying to the listener (Reader) some quieter defines respects of similarity or analogy between the principle and secondary subject.’ [26]. Aesthetic judgments bridge some principle or prior experience to a secondary subject. Architects design by translating concepts into two dimensional graphics that which ultimately imply a multidimensional future reality. She tests the horizontal and vertical space finding accommodation and commonality of adjacency, connectivity and inclusiveness. [26]

Metaphors simply impart their commonplace not necessity to their similarity or analogous. [26] This kind of metaphor simply adds information to the hearer which was not otherwise available which explains the built metaphor that is neither analogous not abstractly common but works, is unique and serves a purpose. [26]

In scientific language there is a difference between dubbing and epistemic access. [27] “Dubbing” (invest with any name, character, dignity, or title; style; name; call) and “epistemic access” (relating to, or involving knowledge; cognitive)”when dubbing is abandoned the link between language and the world disappears” [27].

Architectural metaphors are all about names, titles, and the access to that the work provides for the reader to learn and develop. At its best the vocabulary of the parts and whole of the work is an encyclopedia and cultural building block. The work incorporates the current state of man’s culture and society which is an open book for the reader. The freedom of both the creator and reader to dub and show is all part of the learning experience of the metaphor. As a good writer “shows” and not “tells” so a good designer manifests configurations without words.

However objective, thorough and scientific; the designer, the design tools and the work gets dubbed with ideas (not techne) we may call style, personality, and identity above and beyond the program and its basic design (techne). It is additional controls, characterizations and guidelines engrafted into the form not necessarily overtly and expressly required. Dubbing may occur in the making of metaphors as a way in which the design itself is conceived and brought together. Dubbing may in fact be the process which created the work as an intuitive act. [27]

We absorb new knowledge on the shoulders of old experiences. [28] about Cognition to justify Socrates “learning as recollecting” Consider new concepts as being characterized in terms of old ones (plus logical conjunctives)” As William J. Gordon [7] points out we make the strange familiar by talking about one thing in terms of another. Pylyshyn: "On the other hand, if it were possible to observe and to acquire new “knowledge” without the benefit of these concepts (conceptual schemata (an underlying organizational pattern or structure; conceptual framework) which are the medium of thought), then such [28]

“Knowledge” would not itself be conceptual or be expressed in the medium of thought, and therefore it would not be cognitively structured, integrated with other knowledge, or even comprehended. Hence, it would be intellectually inaccessible”. [28]

We would not know that we know, where knowing is the Greek for suffer, or experience. This was the Greek ideal proved in Oedipus; “through suffering man learns”; we know that we know. Therefore, when we observe that architecture makes metaphors we mean that we know that we know that works exists and we can read authors messages. We learn the work. [28]

The art implicitly has gathered the information and organized it in way that given the right apriori vocabulary, codes definitions and signal and sign cognitions one can read the message in one way or another depending on the individual and the variety of individual perceptions. Buildings, artifacts, products with embedded (encrypted) workings can be read, learned, assimilated, connected and either by epiphany or Pavlovian stimulus –response known. Climbing the stairs of a pyramid in Mexico City or a fire stair in a high rise is essentially the same except for the impact of its context and what the stair connects (create and base) and the object on which the stair ascends and descends. The conditions, ideals and goals are very different while most of the operation is the same. In this way you can say that non-architecture can be identified as teaching nothing. [28]

I don’t believe that there is such a thing, even the “tin-box” (pre-engineered manufactured factory warehouse is a metaphor. It may be a one page comic book character but it has content and is readable. [28]

Pulling from three dimensional and two dimensional means and methods, from asymmetrical and symmetrical, and from spatial and volumetric design principles the architect assembles metaphor metaphorically by associating and carrying-over these principles applying to the program at hand to lift and stretch the ideas into space and across the range of disassociated ideas and concepts making a new and very strange metaphor unlike anything ever created yet filled with thousands of familiar signs and elements that make it work . [28]

Just as practice makes perfect for the concert pianist, opera singer, ballerina, etc so is it for the architect and in aesthetics for the critique and the reader. However, having said this reader is at imitate disadvantage except for the natives of a particular location. Little old ladies in the tiniest Italian village can tell in the minutest detail all about every building, street and area. She has learned and passed on the “knowledge” from her ancestors and is as trained as its creators but in a totally different way. Hers is the act of perception and reader who must recreate and challenge her memory and recollections. She does not have to work at design but at reliving and imagining the design process to find the details and the whole of the building and its social, political and chronological context. Her explanations will include great joy, violent emotions, dis-tastes and rejections of the owners and authors. Her experience of the metaphor will be different from that of the creators both about the same work. [28]

About the difference between words (which are limited and specific to concepts Pylyshyn notes: “...in the case of words there is a component of reason and choice which mediates between cognitive content and outward expression. [28] While I can choose what words I use, whereas I cannot, in the same sense, choose the terms of which I represent the world.” So architects and readers deal with materials, structures, systems and leave the concepts to a variety of possible outcomes [28].

About a “top-down strategy” called “structured programming” in computer science allows for a point of entry into a the development of a new idea where you begin with an idea and after testing and developing that idea bringing everyday knowledge to bear on the development of theoretical ideas with some confidences that they are new either incoherent nor contradictory, and furthermore with some way of exploring what they entail. [28] The point is there are better and worse places for introducing rigor into an evolving discipline. “This explanation is pretty much that path of the development of my theory that "architecture is the making of metaphors" has followed over the past 45 years. From general recognitions, observations and analogies within the framework of professional design practice , painting, sculpture and philosophy to discussions with renowned scholars most notably Dr. Paul Weiss, followed by a lecture series [2] involving prominent design professionals and arts and then years of research and documentation into monographs., [28]

Explaining this approach as a “skyhook-skyscraper” construction of science from the roof down to the yet un-constructed foundations” describes going from the general to the specific in and decreasing general to an increasing amount of detail and pragmatic evidence, referents, claims and resolutions. [28] Structural engineers design from the top down so as to accumulate the additive loads to the consecutive lower members and ultimately the foundation which bears it all. Conceptual design and first impressions both begin with the general and go to the specific. Gated communities, Newtown’s, malls, resorts and commercial buildings give high marks to the overall and superficial .Yet most working metaphors are the result of design and perception from the gestalt (overall concept) to the emptiness (non-gestalt) . Maria Theresa’s Shoenbrun is an excellent example along with major university campuses such as Cambridge, Yale, Oxford, etc where theme and design philosophy prevails and dominates from the facades to the planning techniques of large public spaces to increasing private and smaller spaces and detailing, where with the overall one cannot imagine any thing.

The gestalt is the entity in which all occurs and with the concept there is no context. So it is with metaphor with it the rest of the conversation has no framework and no conception can begin either in its creation or use.

“The difference between literal and metaphorical description lies primarily in such pragmatic consideration as (1) the stability, referential specificity, and general acceptance of terms: and (2) the perception, shared by those who use the terms, that the resulting description characterizes the world as it really is, rather than being a convenient way of talking about it, or a way of capturing superficial resemblances”. [28] Pylyshyn asks:” What distinguishes a metaphor from its complete explication”? (In the case of architecture the entire set of contract documents, program, etc).” Pylyshyn answers: “**I**n this ways of all the arts, architecture is the most profound in that it combines and confirms the secular (of this time), “how things really are” with the gestalt of personal, social, community and private importance. If art is the making of metaphors and it has no real use then how significant is architecture with both “reality” and fantasy/ imagination combined and confirmed by its very existence. The very real existence of a work of art that bespeaks of life and times, exists and is accessible and in our contexts is itself a metaphor of great significance and satisfaction; where I a building it would look like this metaphor. The metaphor expresses a value common to both; both are both real and ideas at the same time.

The metaphor is the bridge and confirmation of art in the world, life in the flesh and flesh become ideas. Architecture is an extreme reification from notion in both creator and reader of materials and idea.

“Metaphor induces a (partial) equivalence between two known phenomenons; a literal account describes the phenomenon in authentic terms in which it is seen”. [28] Socially speaking, worldly people that work in offices, dress, and then behave the way they do, for example, if they reported to work in a manufacturing warehouse? Their scenario of the behavior and the metaphor would not correspond. [28]

7. **Metaphor and Education** discusses the use of metaphor to make the strange familiar and add new information. Readers may wish to review my monograms on Schools and Metaphors (Main Currents in Modern Thought/Center for Integrative Education Sep.-Oct. 1971, Vol. 28 No.1, New Rochelle, New York and The Metametaphor of architectural education", (North Cypress, Turkish University. December, 1997)

“Analogical transfer theory (“instructive metaphors create an analogy between a to-be-learned- system (target domain) and a familiar system (metaphoric domain)” [29] It was these concerns behind Frank Lloyd Wright’s separation from the architecture of Louis Sullivan and what spurned the collective work of the Bauhaus in Germany , that is to express the truth about the building’s systems, materials, open life styles, use of light and air and bringing nature into the buildings environment, not to mention ridding building of the irrelevant and time worn cliches of building design decoration, and traditional principles of classical architecture as professed by the **Beaux-Arts** movement. For equipoise “Unity, symmetry and balance” were replaced by “asymmetrical tensional relationships” between, “dominant, subdominant and tertiary” forms and the results of science and engineering influence on architectural design, a new design metaphor was born. The Bauhaus found the metaphor in all the arts, the commonalties in making jewelry, furniture, architecture, interior design, decoration, lighting, industrial design, etc. [29]

Metaphorical teaching strategies often lead to better and more memorable learning than do explicit strategies explains why urbanites have a “street smarts” that is missing from sub-urban; they actually learn from the metaphors that make up the context. Of course this is in addition to the social aspects of urbanity which is again influenced by the opportunities of urban metaphors: parks, play grounds, main streets, broadways, avenues, streets, sidewalks, plazas, downtown, markets, street vendors, etc.

“Radically new knowledge results from a change in modes of representation of knowledge, whereas a comparative metaphor occurs within the existing representations which serve to render the comparison sensible. The comparative level of metaphor might allow for extensions of already existing knowledge, but would not provide a new form of understanding. [30] When visiting new cities in another country one is immediately confronted with metaphors which create similarities as interactive and comparative as we seek to find similarities and differences with what we already known in our home context.

Visiting, sketching and writing about over seventy European cities I noted the character and ambience of each and the differences between one and another. I drew so many vignettes of buildings and cityscapes noting the metaphor of each.

The visitor (this is my word) may “well be acquiring one of the constitutive or residual metaphors of the place (this is my word) at the same time; same metaphor, different experiences. [30]

Metaphors have a way of extending our capacities for communications. [31]
As most artists their language is beyond speech and to the peculiar craft of their art of which their practice and exercise develops new capacity and opportunity to teach and express thought outside of the linguistics but is nevertheless perhaps as valuable and worthy.

“Speech is a fleeting, temporarily linear means of communicating, coupled with the fact that that, as human beings, we are limited in how much information we can maintain and process at any one time in active memory, means that as speakers we can always benefit from tools for efficiently bringing information into active memory, encoding it for communication, and recording it, as listeners, in some memorable fashion.” [31]

Metaphor is the solution insofar as it encodes and captures the information:”
transferring chunks of experience from well –known to less well known contexts; [31]

The vividness thesis maintains that metaphors permit and impress a more memorable learning due to the greater imagery or concreteness or vividness of the “full-blooded experience” is conjured up by the metaphorical vehicle [31].

The inexpressibility thesis, notes that certain aspects of natural experience are never encoded in language and that metaphors carry with them the extra meanings never encoded in language. [31] One picture is worth a thousand words and how valuable are the arts as makers of who we are as a people, society and time, aesthetically, the work is appreciated in the senses.

“The mnemonic (intended to assist the memory) function of metaphor as expressed by Ortony’s vividness thesis also points to the value of metaphor as a tool for producing durable learning from unending speech” [31]. Architects both compose the program and reify its contents from words to diagrams and diagrams to two dimensional graphics and three dimensional models to reify and bring- out (educate) the user’s mind and fulfillment of unspoken and hidden needs. Needs which may or may not have been programmed and intended; the metaphor is the final resolution until it is built and used. Then it is subject to further tests of time, audience, markets, trends, fashions, social politics, demographic shifts, economics, and cultural changes. The aesthetics of the process and the product are both metaphoric and a metaphor.

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Conrad, Ulrich; 1.3

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Sternberg, Robert J.; 1.5.0

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Footnotes:

1. Metaphor and Thought: Second Edition

Edited by Andrew Ortony: School of Education and social Sciences and
Institute for the learning Sciences: North Western University

Published by Cambridge University Press

First pub: 1979

Second pub: 1993

2. The first lectures "Architecture as the Making of Metaphors" were organized and conducted by Barie Fez-Barrington near the Art and Architecture building at the Museum of Fine Arts Yale University 11/02/67 until 12/04/67. The guest speakers were: Paul Weiss, William J. Gordon, Christopher Tunnard, Vincent Scully, Turan Onat, Kent Bloomer, Peter Millard, Robert Venturi, Charles Moore, Forrest Wilson, and John Cage.

3. American painter Irving Kriesberg was born in 1919. He studied painting in America at The Art Institute of Chicago and the University of Chicago from 1938-1941 and later in Mexico from 1942-1946. Kriesberg began his interest in art as a cartoonist in high school in Chicago. In the 1930's he spent many days sketching the work of the great masters Titian & Rembrandt when visiting The Art Institute of Chicago. In the late 1930's he came under the influence of modern art via School of Paris exhibitions prominently exhibited in the museums in Chicago.

4. Main Currents in Modern Thought/Center for Integrative Education Sep.-Oct. 1971, Vol. 28 No.1, New Rochelle, New York

5. Argumentation: The Study of Effective Reasoning, 2nd Edition; by Professor Dr. David Zarefsky of Northwestern University and published by The Teaching Company, 2005 of Chantilly, Virginia

6. 1.1 Generative metaphor: A perspective on problem-setting in social policy: by Donald A. Schon

7. Metaphorical way of knowing by William J.J Gordon: William J.J. Gordon began formulating the Synectics method in 1944 with a series ... William J. J. Gordon, The Metaphorical Way of Learning and Knowing (Cambridge, ... William J.J. Gordon in his book The Metaphorical Way of Learning and Knowing, Synectics asks participants to solve problems by thinking in analogies--to identify ways in which one pattern or situation is like or similar to another totally unrelated pattern or situation. Synectics uses comparisons such as analogies and metaphors to stimulate associations, developed by George M. Prince; Gordon was one of the original speakers at the Yale lecture series.

8. Paul Weiss: Born in 1901, Paul Weiss has made major contributions to several branches of philosophy, as well as to teaching and scholarly publishing. Alfred North Whitehead remarked: "The danger of philosophical teaching is that it may become dead-alive, but in Paul Weiss's presence that is impossible". Weiss is widely believed to be America's greatest living speculative metaphysician, but he has also made notable philosophical contributions to the discussion of sports, the arts, religion, logic, and politics. Professor Weiss has been highly productive: his Being and Other Realities (1995) was hailed as one of his most exciting books, and as this volume goes to press he is hard at work on yet another major treatise. The distinguished Library of Living Philosophers, founded in 1938, is devoted to critical analysis and discussion of some of the world's greatest living philosophers. Weiss (b.1901) is arguably America's greatest living speculative metaphysician, as well as a noteworthy philosophical contributor to the discussion of sport, the arts, architecture, religion, logic, and politics. He was my mentor when I began this research.

9. The conduit metaphor: A case of frame conflict in our language about language: by Michael J. Reddy.

10. In Programs and Manifestoes on 20th-Century Architecture about Glasarchitektur Ulrich Conrad'

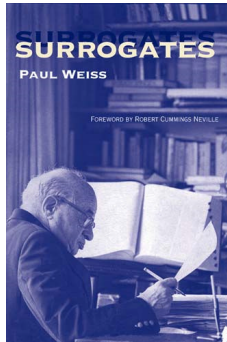
11. The contemporary theory of metaphor by George Lakoff

12. Metaphor allows us to understand a relatively abstract

13. Onomatopoeic metaphors

14. Mapping

15 Schemas



16. Before his death at 101 years of age completed a book called "Emphatics," about the use of language. Dr. Weiss worked in the branch of philosophy known as metaphysics, which addresses questions about the ultimate composition of reality, including the relationship between the mind and matter. He was particularly interested in the way people related to each other through symbols, language, intonation, art and music. Emphatics, (2000), which considers how ordinary experience stands in some dynamic relationship with a second dimension, which provides focus, interruption, significance, or grounds for the first.

16. "Surrogates," published by Indiana University Press. Weiss says that: "A surrogate is "a replacement that is used as a means for transmitting benefits from a context in which its' user may not be a part". Architecture's metaphors bridge from the program, designs and contactors a shelter and trusted habitat. The user enters and occupies the habitat with him having formulated but not articulated any its characteristics. Yet it works. "It makes sense, therefore, to speak of two sides to a surrogate, the user side and the context side (from which the user is absent or unable to function). " Each of us uses others to achieve a benefit for ourselves. "We have that ability". "None of us is just a person, a lived body, or just an organism. We are all three and more. We are singulars who own and express ourselves in and through them. In my early twenties I diagramed a being as ""appetite", "desire" and "mind". I defined each and described there interrelationships and support of one another. Metaphor is one and all of these and our first experiences of sharing life with in to what are outside of us.

As Weiss describes our mother language and other primary things we too ascribe like relations with objects and even buildings assigning them the value from which we may benefit and which may support. As Weiss proclaims that we cannot separate these three from each other so that it follows that we may find it impossible to separate us from the external metaphors. Inferences that are not yet warranted can be real even before we have the evidence. Metaphors are accepted at face value and architecture is accepted at face value. Weiss:" It is surely desirable to make a good use of linguistic surrogates". "A

common language contains many usable surrogates with different ranges, all kept within the limited confines that an established convention prescribes”

It is amazing how that different people can understand one another and how we can read meaning and conduct transaction with non-human extents, hence architecture.

Architecture is such a “third party” to our experience yet understandable and in any context. In his search for what is real Weiss says he has explored the large and the small and the relationships that realities have to one another.

Accustomed to surrogates architecture is made by assuming these connections are real and have benefit. Until they are built and used we trust that they will benefit the end user. Assembling the ambulatory we assume the occupancy, frequency and destinations. We each are surrogates to one another yet fitted into one message. When this passage had been used as read as had been other passages, corridors and links. Like a linguistic the building stands, like a great, stone dagger, emphatic against the sky. The stair, the exit, the space calls, gives emphasis and is strongly expressive.

Despite their styles, periods, specific operations, conditions, operations and goals; despite their building types, country, national language, weather, climate, culture, etc. doors, openings, windows, stairs, elevators, floors, walls, roofs, ramps, landscaping, cladding, decoration, furniture, curtains, etc are all immediately understood and mapped from past to present, from other to present context and form individual to community of uses. A door in a private house is a door in a public concert hall. In fact its differences are naturally assimilated and unconsciously enjoyed.

17. Metaphor, induction, and social policy: The convergence of macroscopic and microscopic views by Robert J. Sternberg, Roger Tourangeau, and Georgia Nigro

18. Figurative speech and linguistics by Jerrold M. Sadock

19. Some problems with the emotion of literal meanings by David E. Rumelhart

20. Metaphor by John R. Searle

Section on “Metaphor and Representation”:

21. Process and products in making sense of tropes by Raymond W. Gibbs, Jr.

22. Interpretation of novel metaphors by Bruce Fraser

23. Images and models, similes and metaphors by George A. Miller

24. How metaphors work by Sam Glucksberg and Boaz Keysar

25 The shift from metaphor to analogy in Western science by Dedre Gentner and Michael Jeziorski

26. Metaphor and theory change: What is” metaphor” a metaphor for? By Richard Boyd1

27 Metaphor in science by Thomas S. Kuhn

28. Metaphorical imprecision and the “top down” research strategy by Zeon W. Pylyshyn
Zenon W. Pylyshyn is Board of Governors Professor of Cognitive Science at Rutgers Center for Cognitive Science. He is the author of Seeing and Visualizing: It's Not what You Think (2003) and Computation and Cognition: toward a Foundation for Cognitive Science (1984), both published by The MIT Press, as well as over a hundred scientific papers on perception, attention, and the computational theory of mind.

Metaphor and Education is the final section:

Readers may wish to review my monograms on Schools and Metaphors (Main Currents in Modern Thought/Center for Integrative Education Sep.-Oct. 1971, Vol. 28 No.1, New

Rochelle, New York and The Metametaphor of architectural education", (North Cypress, Turkish University. December, 1997)

29. The instructive metaphor: Metaphoric aids to students' understanding of science by Richard E. Mayer

30. Metaphor and learning by Hugh G Petrie and Rebecca S. Oshlag

31. Educational uses of metaphor by Thomas G. Sticht

References:

A. "*Argumentation: The Study of Effective Reasoning*, 2nd Edition; by Professor Dr. David Zarefsky of Northwestern University and published by The Teaching Company, 2005 of Chantilly, Virginia

B. "*Difference and Identity*": Gilles Deleuze (French pronunciation: [ʒil dələʒ]), (18 January 1925 – 4 November 1995) was a French philosopher of the late 20th century. Deleuze's main philosophical project in his early works (i.e., those prior to his collaborations with Guattari) can be baldly summarized as a systematic inversion of the traditional metaphysical relationship between identity and *difference*. Traditionally, difference is seen as derivative from identity: e.g., to say that "X is different from Y" assumes some X and Y with at least relatively stable identities. To the contrary, Deleuze claims that all identities are effects of difference. Identities are neither logically nor metaphysically prior to difference, does Deleuze argue, "given that there are differences of nature between things of the same genus." That is, not only are no two things ever the same, the categories we use to identify individuals in the first place derive from differences. Apparent identities such as "X" are composed of endless series of differences, where "X" = "the difference between x and x'", and "x" = "the difference between..." and so forth. Difference goes all the way down. To confront reality honestly, Deleuze claims, we must grasp beings exactly as they are, and concepts of identity (forms, categories, resemblances, unities of apperception, predicates, etc.) fail to attain difference in itself. "If philosophy has a positive and direct relation to things, it is only insofar as philosophy claims to grasp the thing itself, according to what it is, in its difference from everything it is not, in other words, in its internal difference."

In analyzing a metaphor we ask: "What are its commonalities and significant differences and what are the characteristics common to both".

C. *Webster's standard dictionary: latest edition*

D. *Identifying Metaphor in Language: a cognitive approach* Style, fall, 2002 by Gerard J. Steen

E. *The Contemporary Theory of Metaphor*: 1998; A perspective from a Chinese point of view by Ning Yu of the University of Oklahoma

F. *Art* is the intentional and skillful act and/or product applying a technique and differs from natural but pleasing behaviors and useful or decorative products in their intent and application of a developed technique and skill with that technique. Art is not limited to fields, persons or institutions as science, government, security, architecture, engineering, administration, construction, design, decorating, sports, etc. On the other hand in each there are both natural and artistic where metaphors (conceptual and/technical) make the difference, art is something perfected and well done in that field. For example, the difference between an artistic copy and the original is the art of originality and authorship in that it documents a creative process lacking in the copy.

G TOC: Metaphor 2009 Monographs

1. Deriving the **Multidiscipline** axioms from Metaphor and Thought [1]
2. Metaphor and **Cognition**
3. The **science** supporting the stasis to architecture being an art [I]:
4. **Language** of metaphors applied to multidisciplinary architecture
5. "Metaphor's **interdisciplinary** Axioms
6. Metaphoric Axioms for **Micro** disciplinary Architecture
7. Complex Structure: art and architecture stasis
8. Metaphor axioms of art, architecture and **aesthetics**
9. **Aesthetic principles** of metaphor, art and architecture
10. The Six Principles of Art's & Architecture's **Technical and Conceptual Metaphors**
11. Framing the art [A] vs. architecture **argument**
12. Metaphoric **Evidence**
13. Managing the benefits and risks of *architectural artificial intelligence*

H. Axiom's contextual forms

Three levels of axioms matching three levels of disciplines:

1. Multidiscipline: Macro most general where the metaphors and axioms and metaphors used by the widest and diverse disciplines, users and societies. All of society, crossing culture, disciplines, professions, industrialist arts and fields as mathematics and interdisciplinary vocabulary.
2. Interdisciplinary: Between art fields Where as metaphors in general inhabit all these axioms drive a wide variety and aid in associations, interdisciplinary contributions and conversations about board fields not necessary involved with a particular project but if about a project about all context including city plan, land use, institutions, culture and site selection, site planning and potent ional neighborhood and institutional involvement.
3. Micro Discipline: Between architects all involved in making the built environment particularly on single projects in voting relevant arts, crafts, manufactures, engineers, sub-con tractors and contactors. As well as owners, users, neighbors, governments agencies, planning boards and town councils.

Researched Publications: Refereed and Peer-reviewed Journals: "monographs":

Barie Fez-Barrington; Associate professor Global University

1. "**Architecture the making of metaphors**"

Main Currents in Modern Thought/Center for Integrative Education; Sep.-Oct. 1971, Vol. 28 No.1, New Rochelle, New York.

2. "**Schools and metaphors**"

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3. "**User's metametaphoric phenomena of architecture and Music**":

"METU" (Middle East Technical University: Ankara, Turkey): May 1995"
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4. "**Metametaphors and Mondrian**:"

- Neo-plasticism and its' influences in architecture*" 1993
Available on Academia.edu since 2008
5. "*The Metametaphor of architectural education*",
North Cypress, Turkish University. December, 1997
 6. "*Mosques and metaphors*" Unpublished, 1993
 7. "*The basis of the metaphor of Arabia*" Unpublished, 1994
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 10. "*Arabia's metaphoric images*" Unpublished, 1995
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"Architecture: University of Technology in Datutop; February 1995 Finland
 13. "*The Aesthetics of the Arab architectural metaphor*"
"International Journal for Housing Science and its applications" Coral Gables, Florida. 1993
 14. "*Multi-dimensional metaphoric thinking*"
Open House, September 1997: Vol. 22; No. 3, United Kingdom: Newcastle upon Tyne
 15. "*Teaching the techniques of making architectural metaphors in the twenty-first century.*" Journal of King Abdul Aziz University Engg...Sciences; Jeddah: Code: BAR/223/0615:OCT.2.1421 H. 12TH EDITION; VOL. I and "Transactions" of Cardiff University, UK. April 2010
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 20. "*Urban Passion*"; October 2010; Reconstruction & "*Creation*"; June 2010; by C. Fez-Barrington; <http://reconstruction.eserver.org/>;
 21. "*An architectural history of metaphors*"; AI & Society: (Journal of human-centered and machine intelligence) Journal of Knowledge, Culture and Communication: Pub: Springer; London; AI & Society located in University of Brighton, UK;

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DOI 10.1007/s00146-010-0280-8; : **Volume 26, Issue 1 (2011), Page 103.**

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Pgs 3-12 (4/24/2010)

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