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Architectural Wit: Le Corbusier and the Use of Visual Analogy and Metaphor

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Prologue:

Colin Rowe ascribes to Le Corbusier a fascination with contradiction and his ability to “bring into headlong confrontation the most diversely significant images and metaphors, this is something he rarely talked about and which, though it was fundamental to him, he made no attempt to rationalize”¹

The ability to see the world of ideas in visual terms and as a method equivalent to literary poetics distinguishes the work of Le Corbusier from other architects of his generation. Yet, as Rowe suggests, it was a private discourse, one that was left for the keen observer to discern and evaluate. (“eyes that can see”) Moreover a detailed discussion of his use of visual metaphor and analogy has been difficult to find in the critical literature in any sustained effort that would go beyond merely making the insightful comparison, most notable, as of course did Rowe, in “Mathematics of the Ideal Villa,” when he compared the plans and proportional structure of Palladio’s Villa Malcontenta to the Villa Stein at Garches.²

Starting with the travel sketches made from his various trips as a young man, followed by his encounter with Ozenfant, with his collection of photographs, and reinforced by his dedication to painting, Le Corbusier formulates, in an astonishingly short time between 1918 and 1925, a complete visual reference system that guided his architectural production for the rest of his life.

Several broad themes emerge: the fascination with the machine-age and its utilitarian products, the achievements of modern engineering and technology, the proposal for a biological analogy with the machine involving evolution and standardization, the painterly exploration of the cubist surface of deep and shallow space, a sly manipulation of sacred and profane images to define the twentieth century “zeitgeist”, and the creation of surreal landscapes on his newly constituted ground planes or roof terraces. All this is tied to a social vision of a reformed society that establishes a proper relationship between the individual and the collective, such as might occur on the modern steamship (fig. 1-2)

Wit, of course, is a sophisticated form of commentary that penetrates the obvious, is a play on the known and discovers new possibilities of understanding and meaning. It is a style of reasoning, a form of gaming and ultimately a risky argument depending on chance. Often it conceals multiple interpretations; both literal (analogy) and poetic (metaphoric). It is not merely a joke, yet amusement is possible and even sought after. It is a serious venture, one that the functionalist architect deplored or can be reduced to obvious one-liners. As Robert Venturi has pointed out³, architecture can be a “duck” or a decorated shed, and sometimes combinations of both.(fig. 3)

The use of metaphor, simile and analogy in architecture thinking is not always a common occurrence, but of course was the basis of Classical architectural language, in its transformation from wood to stone construction and from sacrificial elements into decorative details. Visual quotation, like literary quotation, is a method of



Fig. 1

Fig. 2

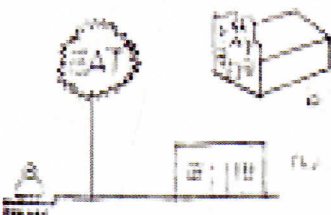


Fig.3

establishing legitimacy. A visual analogy is therefore seen as being the same as a simile, using like or as to imply or make the intended connection between the cited quotation and the formal idea.

Metaphors are more rare occurrences and depend on a more poetic transformation of the original idea or image. A ship can be a metaphor for a collective enterprise similarly housed in Le Corbusier's Unite d' habitation typology: both are isolated, both are self-contained worlds, both imply mobility and they service a modern and perhaps rootless collective society in their respective landscapes. While Leger's Siphon (fig.4) has a similar look to the Delage brake mechanism (fig. 5) and both are products of a machine age industrial production, their appearance in the plan of Chandigarh (fig. 6) is a quite astonishing transformation of the original images. Now the idea is one of comparing properties of hydraulic pressure, flow and circulation as well as looking like a brake or siphon.

There are two distinct parts to this visual and intellectual transformation. The first is to recognize an aesthetic quality in the brake section that corresponds to the siphon as specific products of the "machine age" worthy of inclusion in a modern vocabulary, the second is to then see a relationship thirty years later in pressure and flow that could be applied to the monsoon drenched surface of the plain on which Chandigarh was to be constructed. Thus is born a private comment on the nature of the local site and its climate, the problem of water run off in general and specifically a way to link the plan of the capitol grouping to the lake and dam that was to be constructed to the East. This is visual intelligence operating at its most profound level and an indication of the complexity of a design method particular to Le Corbusier.

Le Corbusier, starting in 1920 with his first articles in "L'Esprit Nouveau"³ and later collated in his text "Vers une Architecture"⁴ in 1922, issues a challenge to his readers. Three articles with the title "Eyes that don't see", proclaims a theoretical polemic that is not merely a verbal/visual manifesto, one that is based on the juxtaposition of photographs and images from non-architectural sources and his architecture. Cleverly mixing photographic images with verbal and visual 'one liners' worthy of modern advertising, he extols the power of the image to reveal connections between his architectural preferences and the imbedded messages in the photographs. Modern life will have the freedom of liberation found in flying and perhaps in occupying the correct orientation in a Marseilles Block site plan. (figs. 7-8) Thus is created a new form of architectural theory, one that is based on visual metaphor and analogy and uses association not heretofore associated with architectural production. In fact it is the birth of modern media and advertising as a graphic system of signs and signifiers being manipulated to sell an idea or product, in this case his own work as an architect.

Contemporary discourse in the visual arts is much indebted to Le Corbusier's style of manifesto, yet his method has created some confusion between the nature of a visual metaphor and the use of an image as a visual analogy. Both uses reside in the manipulation of precedent as a source of authenticity, whereby reference and connection is made through the use of memory between one idea and another. The difference would seem to be that metaphor adds a new meaning through association and analogy is more of a quotation that grants legitimacy. What makes the polemic of Le Corbusier so powerful is that he manages to use the same image in both senses and thus creates complex meanings and associations, not often found in the work of an architect.

Fig. 4



Fig. 5

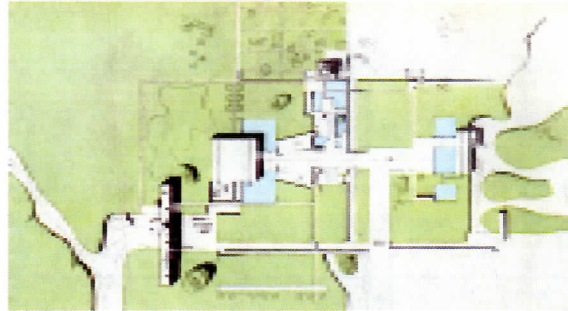
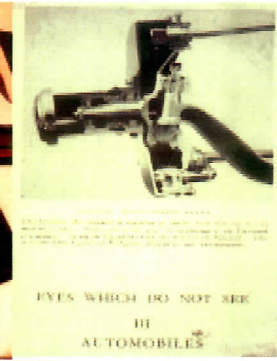


Fig. 6

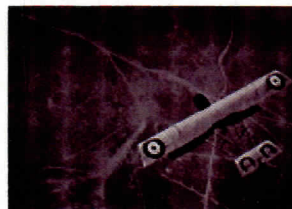


Fig. 7



Fig. 8

The following essay will illustrate, using analogy and metaphor as design strategies, some of the major sources of Le Corbusier's formal production as revealed by images that he himself chose and/or were known to him. It is not meant to be inclusive (an impossible task) but as an aid to demystifying his work and as a stimulus to look harder at the work itself. It also might serve as a standard by which one might measure the production of other architects.

A. Design strategies:



Fig. 9



Fig. 10

To establish a new level of recoverable meaning in his work and a new vocabulary more appropriate to the modern age, Le Corbusier moved from his early attempts at establishing a new regional art nouveau style for the Swiss Jura, (fig. 9) where he was born, to a more abstract formulation, (fig. 10) based on his work experiences in Paris with August Perret and Berlin with Peter Berhens. To establish this new and more abstract vocabulary he devised a set of visual strategies to make his connections and intentions more accessible to the viewer. Both in his writing, painting and ultimately his architecture, he used the same set of strategies; the quotation of specific sources and images, the inversion of normative practices, the use of literary and visual analogies and ultimately the creation of metaphorical inventions to explain his intentions.

1. Analogy

Analogy depends on a one to one transference of image and its' re-use. The simplest form of quotation is that of the literal transfer, for example, of the use of contemporary industrial materials and objects. The subway tiles from the Paris Metro, the industrial steel window sash from factories and pipe rails from steamship design all imply a connection with the original source, that is still recognizable in its new context.

Le Corbusier, on occasion has even quoted himself as in the appearance of a modified the Ville Savoye of 1929 (fig. 11) on the roof of the 1953 proposal for the Governor's residence at Chandigarh. (fig. 12) Also the re-use of a specific building typology of his own invention defines Le Corbusier's approach to the museum typology, is also a form of self-quotation. And of course any architectural detail or element that reappears in a new project is a way to establish the rules of a "style" or vocabulary.

Much of the appearance of a new design vocabulary that could be called Modern as an aesthetic, depended on inverting the normative practices of traditional and classical architecture. Flat roofs instead of pitched roofs, gravity denied by new structural systems with heavy loads on top and open space on the bottom, horizontal windows versus the traditional vertical shuttered window, suppression of construction detail and material abstraction versus the elaboration of detail and decoration. The success of this type of transformation depended on a firm understanding of what was being inverted, thus two images were involved in the visual transformation.

2. Metaphor

A metaphor is like an analogy, with the intent to establish meaning by its re-use. But placed in a new context, an analogy can rise to the level of a metaphor with entirely new meaning. It can start out as a direct copy or a transference of meaning that is quite literal. Or it can lead to associate meanings or ideas by means of juxtaposition of unfamiliar sources. A particularly provocative transference by Le Corbusier of one image into a new context is the appearance of the plan for St. Peter's by



Fig. 11

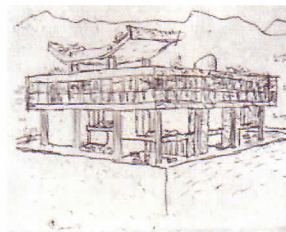


Fig. 12

Michaelangelo (fig.13) in his 1922 plan for a City of Three Million. (fig. 14) The quotation is direct but the transformation of meaning is ironic and profound given its new context. The plan of the most sacred church in Christianity by one of the artists that Le Corbusier considered a peer, is placed into the new business center, which in turn is the heart of the composition and focus of the new modern city plan. Thus the new secular religion of contemporary society is defined and dedicated to commerce, not faith or religion, and the reputation of Michaelangelo as an architect is favorably compared to that of Le Corbusier, as an added benefit.

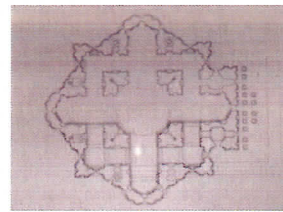


Fig. 13

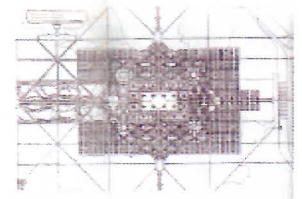


Fig. 14

Metaphor depends on the insertion of one meaning into a totally new context to alter the meaning.

The use of standardized toilets and bidets, particularly the sink in the entry of the Ville Savoye used as a baptismal font in an ironic manner worthy of Duchamp is one such example. Safety pins and corkscrews (fig.15) become design ideas for circulation systems at the Ville Savoye. (fig.16) It is the formal properties of the object that excite, as well as their ubiquitous presence in everyday life. As with the plan of St Peter's, the new context is the key to understanding the transformation of meaning.

B. Image sources:

To engage in his sophisticated form of visual/word play, he needed sources and themes that he thought to be relevant to the task of establishing a new vocabulary for modern society. The following are some of the sources for that endeavor.

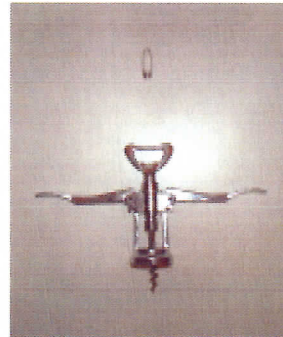


Fig. 15

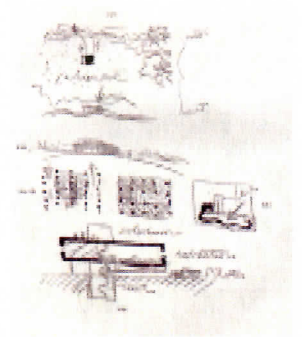


Fig. 16

1. Products of a machine age civilization

One of his first challenges to the reader is to view the marvels of the new machine age production and lament that the clarity of thinking is not transferred to the products in the home or in the design of the home itself. Thus the analogy is about clarity, precision, geometry and specifically the simplicity of form that many engineered products have achieved. The objects are "quoted" in his plans and the use of three-dimensional forms such as steamships, airplanes, and grain silos (fig. 17) are presented to equip the "Dom-ino" structural diagram of 1914, fig.18) in order to create the Ville Savoye of 1929 and the Maison Cook of 1928. All of this is to justify a new architecture, stripped of ornament and references to the past. The visual quotation of the SS Aquatania (fig.19) and the Ville Savoye (fig.20) is obvious to all and certainly is a one-liner. However the real meaning lies deeper in the number of other ways the two images interact. Movement, displacement, sun and fresh air, a place from which to view the landscape and seascape, as well as the devices of the ribbon window, piloti and roof deck make their appearance as program and design element. For the one of the first times, in a systemic manner, architectural style is not based on the orders of Vignola, or other historic periods. It is a major conceptual jump and the built world has never been quite the same since.

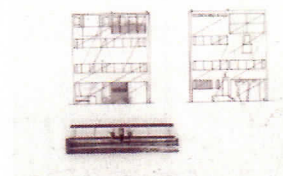


Fig. 17

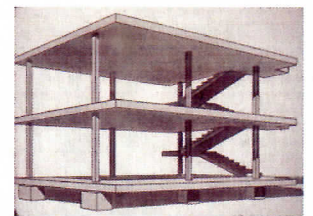


Fig. 18



Fig. 19



Fig. 20



Fig. 21



Fig. 22

Similarly the image of the Farman bomber (fig. 21) has an analogous compositional relationship to the Heidi Weber Pavillion in Zurich, (fig. 22) again a forty-year time span between one image and its re-use. It also has the organizational principle of sliding one mass through a separate independent structure. An airplane bulkhead (fig. 23) and its structural grid can become the basis of a plan for Buenos Aires. (fig. 24) At the level of metaphor it is possible to see a world of prefabrication, independent systems and freedom of choice achievable through new construction technologies captured by his expression of the spirit of the new age in his visual references.

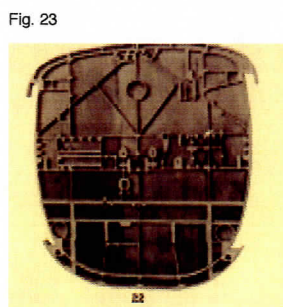


Fig. 23

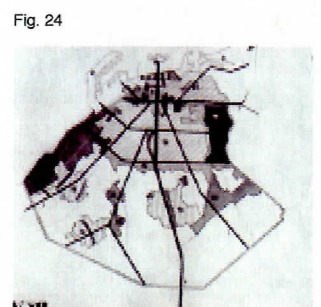


Fig. 24

2. Contemporary construction

A continuing theme in "Towards a New Architecture" is that of defining the role of the engineer and that of the architect in contemporary culture. Admiring the achievements of the engineer, particularly Fressenyet, as well as Eiffel, Le Corbusier lifts directly an image of the hanger at Orly by Fressenyet (fig. 25) and re-uses it in his project for the Palace of the Soviets. (fig. 26) Note that the perspective image is taken in the same place as the photograph, thereby reinforcing the link between the two images.



Fig. 25

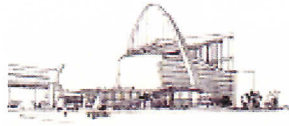


Fig. 26

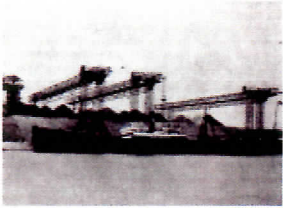


Fig. 27



Fig. 28

He is also a believer in steel as well as reinforced concrete. The Maison Clarte of 1933 in Geneva is the first welded steel frame in Europe. This idealized frame, now in concrete, is then re-used as the metaphoric bottle rack for suitable for inserting the wine bottle apartments types at the Marseilles Unite and elsewhere, in the 1940's and 1950's.

The coal loaders on the Rhine (fig. 27) become the model for the civic center in Algiers. (fig. 28) Both, coal and cars, involve movement and confrontation with the water's edge, although dumping cars off the edge of the tower in Algiers might not have been the most successful solution to ending the auto-route in the air!

3. Biological analogy and Darwinism

One of the most developed arguments using visual metaphors and analogies occurs as a result of his lecture trip to Buenos Aires in 1929 and which were set down in *Precisions*.⁶ The article, "The Plan of the Modern House"⁷ is an extraordinarily clear statement of his design values and ideas, illustrated by his sketches and notes from the lectures. In it he compares the anatomy of the human body to that of an automobile: skeleton, muscles and organs to chassis, muffler pipes and body. (fig. 29) Later the theme emerges as a site plan for Olivetti that is a lung complete with arterial circulation and a pedestrian nervous system. (fig. 30) There is also a comparison of the mechanical evolution of the automobile (fig. 31) with the formal logic for the evolving design of his new dwellings. (fig. 32) It is a complete theory for formal production, if overly optimistic regarding the capacity of the mechanical production process to evolve or self-improve, that links evolutionary biology, mechanical production and Vitruvian man.

4. Architectural precedent

Le Corbusier studied architecture, although not in the same way as one might today. While he had some exposure to a formal architectural education in his special design section in the Art School at La Chaux de Fonds, established by his teacher and mentor L'Eplattenier, his real exposure to architecture was looking at and copying plans in the libraries of Paris, or on his travels. For example, there is a direct correspondence between the chimney section of the typical Jura farm house where he lived one winter (fig. 33) to that of the assembly hall at Chandigarh, (fig. 34) and the paraboloid shape of atomic generating plant cooling towers and the wire waste paper baskets in his office. The chapel at Firminy is yet another project cast in the same theme. And of course Palladio was always on his mind as seen earlier at Poissy with the Rotunda in Vicenza.

5. Travel sketches

Primary among sources for quotation and reference were the travel sketches recorded in the carnets, or sketchbooks, that he always carried with him. Whether the first trips to Italy, the

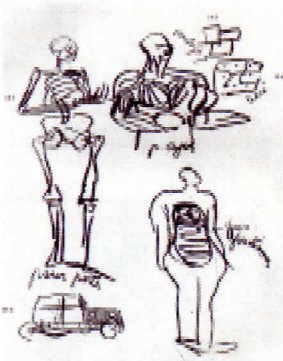


Fig. 29



Fig. 30

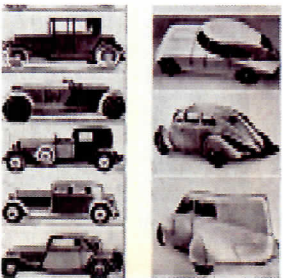


Fig. 31

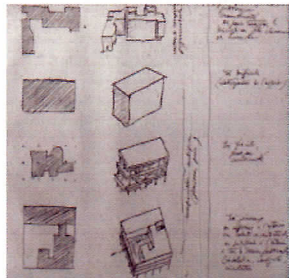


Fig. 32

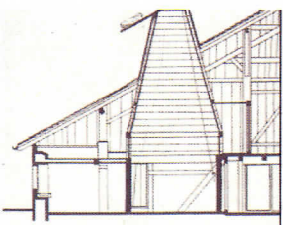


Fig. 33



Fig. 34

Voyage to the Orient,⁸ or site visits in general, the recording of his observations was unrelenting. Sometimes used a place makers the sketch was an "aid-memoire" to specific places or details. Quotations from known plan types occur in his work or in details from his carnets such as the "Maison Turk" (fig. 35) and the Maison Plainex façade. (fig. 36) Other times the image takes on an iconic status as a theme to be manipulated over and over again. He would frequently refer back to his sketches while in the office or direct the staff to consult the Oeuvre Complete⁹ to help clarify a project, according to those who worked in the office.

6. Post Cards and Photography

There is ample evidence in the achieves of the Foundation Le Corbusier¹⁰ that he was an inveterate collector of post cards and that he re-used the images, the themes and compositional structures in his paintings, be they of women, views or buildings.

That he was also a skilled photographer there can be no doubt. While the technical skills in he darkroom were not as strong, his compositional skills and eye for the right image were uncanny. The photographs from the Acropolis are among the best that he took and provided material for re-cycling the rest of his career. The photograph of the pediment of the Parthenon (fig. 37) and the image of the chapel at Ronchamp (fig. 38) bear an uncanny resemblance, as has been pointed out by David Diamond in an unpublished article.¹¹

7. Painting

The paintings provide the most direct link between his thought processes regarding architecture. Working at home in the mornings, Le Corbusier was able to explore the formal relationships and poetic transformations in his two dimensional work, which then provided material for the afternoon sessions in the office. (figs. 39-40) He went from using industrial "object types" such as glassware, books, or musical instruments in the Purist period to introducing anthropomorphic shapes and "objects of a poetic reaction" in his painting. He was well acquainted with the Parisian art world and was certainly influenced by Dada ready-mades and Surrealist mental associations. (fig. 41) His manner of working was to infuse poetic resonance in his preferences from whatever source, to enable "those who deserve it" a richer interpretation and justification for his work. Aware that a decisive break with the past and it's baggage of styles had opened a Pandora's box for individual expressionism, he aimed at narrowing the limits of this new and open discourse to define a modern culture and promote a future that could be shared.

The Purist period, roughly between 1919 and 1925, provides the clearest link between painting and architecture when shapes and design strategies are clearly quite similar. Transparency, figure ground reversals, color, and specific shapes, such as the piano curve, are manipulated in both genere. Frontality and layering are standard devices for exploring pictorial reality as well as architectural composition in two and three dimensions. More painterly, were the efforts to translate "Cubist space" into architectural space. Themes such as deep vs shallow space by eliminating the perspective diagonal and framing the view become common strategies. (fig. 42)

Viewing an object from diverse views simultaneously was a cubist pictorial device, particularly from above and frontally in the same pictorial image. Le Corbusier was also attracted to manipulating both the space of parallel vertical walls and that of the Dom-ino slab sandwich. At the monestary of LaTourette he uses these strategies to manipulate the landscape (fig. 43-44) into the

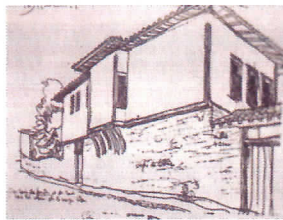


Fig. 35



Fig. 36



Fig. 37



Fig. 38

Fig. 39

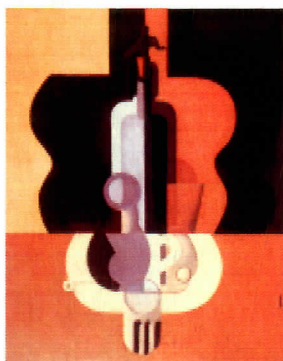


Fig. 40

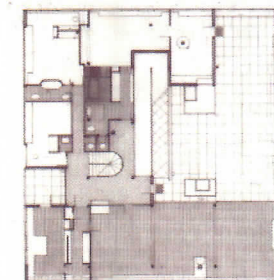


Fig. 41



Fig. 42

Fig. 43



Fig. 44



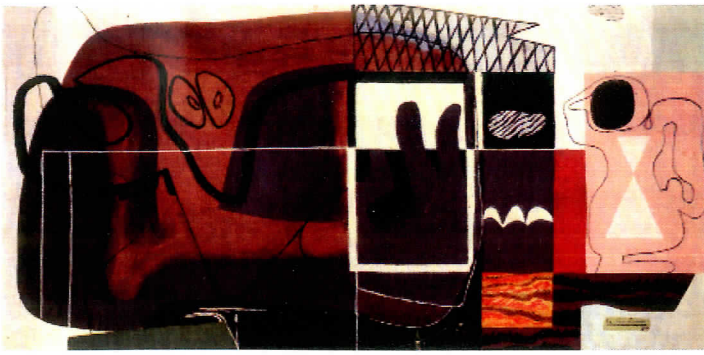


Fig. 45

architecture as well as define the program between sacred spaces and profane uses.

8. Objects of a Poetic Reaction

From collecting glassware, bottles, pipes and other products of a machine age production and standardization, Le Corbusier went on to collect bone fragments, seashells, and other objects of an organic nature to complement the mechanical. They appear in his painting after 1927 and in his architecture starting in the 1930's. The compositions are looser, more organic and the symbolism is more obscure and private. This was a period during the 1930's when he did not wish to exhibit his painting, and the influences of surrealism and dada are more evident, along with a fascination for the female nude and body parts, such as hands, genitalia and faces. (fig. 45)

C. Formal themes:

Finally, what were some of the visual and formal ideas that re-occurred throughout his creative life. There appear specific themes that guided his choice of images or that caught his eye. The following is a partial list of significant formal themes and devices in his creative work that link his choices of images to be manipulated to that of specific or generic themes in the architecture.

1. The cube

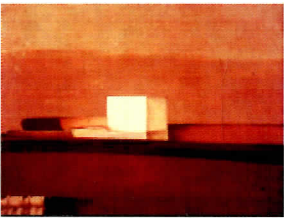


Fig. 46

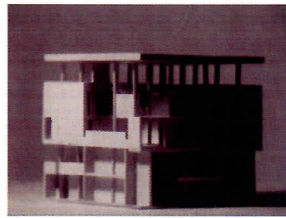


Fig. 47

The cube forms an iconic part of the Le Corbusian visual mantra. Discovered on Mt. Athos in his travels, it first appears in what he wants to call his first oil painting of 1912, "La Chimnee". (fig. 46) The cube is white, ideal, and even glowing, its equal proportions easily visible. It part of the Platonic solids of cone, sphere and cube that appeal to both the eye and the mind and it provides a link back to the lessons of Rome as illustrated in *Vers une Architecture*. It appears as dice in his paintings, signifying perhaps chance or game playing. The Villa Shodan (fig. 47) designed in the 1960's in Ahmenabad, India may be the most exacting expression of this life long preoccupation with volumetric clarity, gaming and exploration of space.



Fig. 48



Fig. 49

The cube also appears as a transparent and ephemeral volume of space in at least two instances. In the Ozenfant Studio House of 1922 (fig. 48) and underneath the Villa Stein at Garches, (fig. 49) points in space define the limits of a perceivable square shape with one corner missing, which has to be completed by the eye and the mind in order to be understood. It is a conceit and indeed a visual pun.

2. The double square

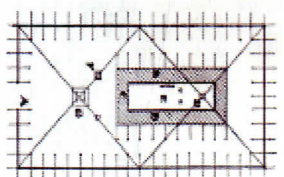


Fig. 50

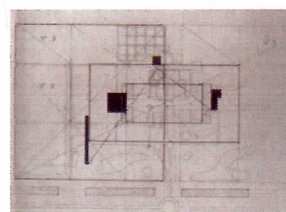


Fig. 51

Sometimes the analogy is more abstract such as the use of the regulating lines or proportional systems. Akin to the precision of the engineers, the use of mathematics allows for links to the writings of Vitruvius and his system of classical hierarchy of the parts and the whole. The truth of numbers and their abstract and universal application appealed to his sense of order and precision. The use of the double square as a fundamental organization is a result of his drawing of the Primitive Temple (fig. 50) as illustrated in the *L'Esprit Nouveau*. It is the basis of the Citrohan House parti and well as for his urban planning schemes for the City of Three Million and Chandigarth. (fig. 51) With the Citrohan House parti, he is able to establish an oppositional design strategy of man/nature, solid/void, and inside/outside that is key to his manner of dialectical thinking. It also forged formal link between the idea of

the dwelling unit and the city as being part of the same design strategy.

3. The right angle

Imbedded in the double square is his attempt to geometrically insert the right angle and produce a universal proportion system, which he calls the Modulor.¹¹ (fig. 52) For Le Corbusier the right angle is a fundamental fact of life. We walk upright, the horizon is at 90 degrees to our verticality and the axis mundi of our conceptual cosmos links the underworld to the heavens. Starting in the 1950's Le Corbusier writes the "Poem of the Right Angle",¹² (fig. 53) a personal, all embracing statement of existence. It is both a literary poem and a visual one. In it is the manipulation of analogy and metaphor at his most creative using only his images.

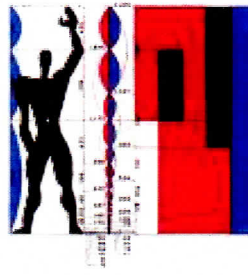


Fig. 52

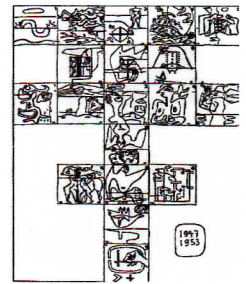


Fig. 53

Conclusion:

It would be presuming too much to say how Le Corbusier thought about designing anything, despite his best efforts in books, lectures and essays to describe his design intentions and process. He often used the personal analogy of his life being like that of the acrobat, always on the edge defying failure by taking chances and risks. His visual insight is the product of both an ability to see and draw, as well as an intelligence well above the norm. Fundamentally, his was a visual intelligence of the highest order.

How did this come about? Predictably it starts with his formal education and training as an engraver of watchcases. He was encouraged to draw and paint as a child. In school his attention was focused on the direct observation of nature, seeds, flowers and trees, always looking for the structure and geometry in the organism. This in turn became material for exercises in pattern making which could be translated into designs for decorative details, stencils, and indeed, watch cases. (fig. 54) Later this power of observation for pattern, form, and structure would be the basis for "seeing" in images their potential for comparison, transformation and/or application to design problems. (fig. 55)

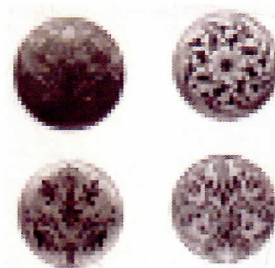


Fig. 54

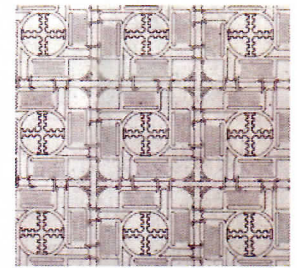


Fig. 55

While his most famous aphorism is "a house is a machine for living in", his interest was never in literally making architectural machines, a la Buckminster Fuller, but rather expressing ideas in symbolically rich world of image and idea in his architectural syntax.

The "primitive temple" (fig. 56) is a tent surrounded by a double square proportioned wall of stakes and canvas. In his later transformation as a pavillion structure (fig. 57) he transforms it into a new temple for art or exhibitions, constructed from prefabricated steel components and the site is no longer bounded, but still a double square, fit for a nomadic modern man in the 20th century.

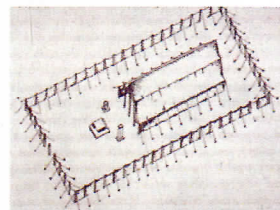


Fig. 56

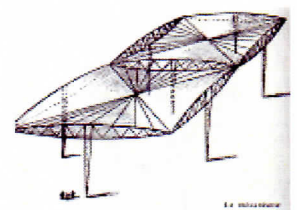


Fig. 57

So, finally, what is architectural wit? Is it simply being clever with the manipulation of images to generate form? Or is it in fact a strategy for making commentary on the contemporary cultural condition that is profound, insightful and progressive. It is a literary strategy, certainly, one perhaps more appropriate to an intellectual rather than an architect. Ultimately Le Corbusier was most proud of the fact that his passport listed his profession as being that of "Homme des Lettres" rather than "Architecte."

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- Fig. 6 Site Plan, Chandigarh, *Oeuvre Complete*, vol. 6, p.
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- Fig. 9 Villa Fallet, La Chaux de Fonds, Switz. photo Abbey
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- Fig. 26 Palace of the Soviets, Moscow, *Oeuvre Complete*, p.
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11. Le Corbusier, *Modulor I*
12. Le Corbusier, "Poem of the Right Angle"