Human Figure in Le Corbusier’s Ideas for Cities

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Abstract
Vision is one of the most important means of architectural and urban communications. Many original protagonists of modern architecture had supreme confidence in their deterministic power and vision. They believed that properly designed architectural objects and cities would improve not only the form but also the content of the society. Le Corbusier argues that architecture is the key to everything. Thus Modern architects were convinced that their visions were reality, their ideas truth. Embodying many of the values typical of modernity, Le Corbusier planned not only a physical environment, but also proposed a social utopia. The body, for Le Corbusier, acted as the central referent; its analogy infused biology into the mechanics of the city and building. Based upon the human figure as a system of proportions and harmony, he wants to establish the dualistic arguments for his concept of planning: one is a philosophical argument about geometry, nature, technology; the other is an argument about the social problems resulted from the historical changes and demographical changes in cities. This study is intent on discussing how Le Corbusier used the notion of geometrical order and body, and describing how his principles were recognized and applied to his works.

Keywords: geometry; technology; body; vision; harmony

Introduction
In a search to make architecture more meaningful, architects manipulated architectural form in a manner which suggests that it was being used as a sign. The figural spaces create memorable images, have a hierarchy in size and/or sequence. A figure is a body or object having shape or form which is identifiable and recognizable. To identify whether architectural form is primarily or essentially symbolic, it is necessary to address of what the forms represent abstractly (the signified) and how the sign itself is constructed (the signifier). The Romans were instrumental in developing a hierarchical spatial concept. Their interior space was conceived statically with symmetry. In the Renaissance figural spaces became the vortex for architectural organization creating a hierarchy of spaces. Renaissance space, at first regular, bisymmetrical, relatively static, and horizontally oriented, gradually began to be organized vertically as well as horizontally, and the eye is moved towards a central focus (Ball, 1980).

As incorporating reference to the human body for proportional and figurative authority, the anthropomorphic tradition of the human body have underlain from Vitruvius, Alberti, Filarete, and Di Giorgio Martini to the present. In Renaissance, the body is literally projected onto the building—the building is a physical body analogy, deriving its proportions from, and indeed standing in for, the body itself. The body, its balance, standards of proportion, symmetry, and functioning mingling elegance and strength was the foundation myth of building (Vidler, 1990).

Le Corbusier (1923) observed the columns of the Parthenon, studied the proportions of their design, and concluded that “reality has nothing to do with books of instruction.” To Le Corbusier, reality is a word in our language suggesting clear, unambiguous entity; it appears to have qualities of factualness, concreteness, and uncontroversible provability. He (1923) argues that “do not believe until you have seen and measured and touched with your fingers.” It seems that reality is a social product affecting not only beliefs, but perception of objects themselves.

Using the body metaphor, Le Corbusier tried to establish order as the basis for measurement and proportion. For Le Corbusier, order is expressed by pure forms, using symmetrical grid and visual unity. The right angle reins supreme. He wished to portray the ideal type of an industrial city, to formulate an image which would express in geometric terms the general truths which he believed were applicable to al modern societies. He believed that industrialization had produced the
conditions for a new era of justice, harmony, and beauty; that this era would be the fundamental revolutionary act separating the past from future. In addition, he thought that the organic city, the city that emerged slowly as the result of many individual theory was necessary if the city were ever to display the harmony that is the basis of efficiency and beauty.

Harmony is in the structure of the whole city and in the complete life of its citizens. Le Corbusier’s task was to create a complete environment in which man, nature, and the machine would be reconciled. The city is the grip of man upon nature. Its geometrical form is the expression of a society liberated from the constraints of ignorance and conflict, a society which has organized itself according to the human laws of reason. According to this concept towards the city, he used geometrical order through anthropomorphic metaphor, and synthesized view of harmony. Le Corbusier’s ideas for cities and his impact on urbanism throughout the world are examined through a discussion of the factors and events that influenced his development and of the qualities and shortcomings of his principal creations. His sound urban principles are now recognized and applied to the architecture and the city. This study is to discuss how Le Corbusier used the notion of geometrical order and body, and describe how his principles and frameworks for cities were recognized and applied to his work—Ville Radieuse.

Geometrical Order
Where does the abstract of Le Corbusier’s thinking come from? His first article on the subject appeared in L’Esprit Nouveau: The Pack Donkey’s Way and Man’s Way (1922, no.17) and Order (1922, no.18). These are much concerned with geometric order. According to Le Corbusier’s view, man would hack away the stones, scrambling upwards in a straight line, whatever the gradient whilst eschewing any shade to lighten his physical labors. In Order, Le Corbusier describes another respect to the right angle.

The laws of gravity seem to resolve for us the conflict of forces and to maintain the universe in equilibrium; as a result of this we have the vertical. The horizon gives us the horizontal, the line of the transcendental plane of immobility. The right angle is, as it were, the sum of forces which keep the world in equilibrium (Le Corbusier, 1922).

Order is like a metaphor in which the dialectical relationship occurs between two seemingly different items, but through the process of consciousness, the analytical human mind starts to make these comparisons based on its past experience. To Le Corbusier, Classical orders were dead, a defunct symbolic system, that needed to be replaced by a new set of conventions for the machine age. Rather than throwing tradition away completely, he seemed to think that the purification of the machine was on the point of realizing fundamentals of Classicism such as proportion, repose, tightness of idea and form, in new language (Curtis,1992).

Le Corbusier develops the right angle in The Poem of the Right Angle (Le Corbusier, 1955) as exploration of cosmic duality introduced first by the opposition of the sun and moon and the colors red and blue on the cover of the poem. The duality ultimately resolves in the right angle crossing itself of the archetypal masculine vertical and archetypal feminine horizontal. In Section of E-3 of the poem, Le Corbusier discusses the right angle calling it “right angle of the character of the spirit of the heart.” He verifies the right angle in Section E (Le Corbusier, 1955):

To become order/ the modern cathedrals
Will be constructed on this/Alignment of fish
Of horses of amazons/
The constancy the uprightness the/Wait the desire
The splendor of brut concrete
And the grandeur which it will/ have had to think the marriage/ Of lines/ To weigh the forms

He offers the complex model of the right angle as the ordering principle of modern architecture. The gestalt reading of the right angle, i.e., the intersection of the vertical and horizontal is greater than the two. Within the context of the poem there have been a number of metaphors of the right angle. It reads as a complex model which includes elements of personal geography and occult symbolism.

What is Cobusier’s idea for geometrical order? To Le Corbusier, geometrical figures are naturally more beautiful than irregular ones, and architecture is a geometrical abstraction, imitating the mathematical harmony of natural order. Le Corbusier (1923) argues that axes, circles, right angles are geometrical truths, and give results that our eye can measure and recognize; whereas otherwise there would be only chance, irregularity and capriciousness. And thus geometry is the language of man (Le Corbusier, 1923). There is a central place where symbols occupy in a universe on the basis of geometric order:

The philosophical cross, the two lines running in opposite directions, the horizontal and the perpendicular, the height and breadth, which geometrizing Deity divides as the intersecting point, and which forms the magical as well as the scientific quaternary, when it is inscribed within the perfect square, is the basis of the occultist (Blavatsky, 1976). In discussing his paintings, Le Corbusier has commented that around 1928 he enlarged his pictorial vocabulary to include objects such as shells and rocks which reflected the laws of nature. It seems clear that at least from this period Le Corbusier’s search for a solution to architectural problems centered around creating an art which was resonant with the laws of nature.

The laws of nature and the laws of men. Since man is a product of nature, the laws he lays down for himself must accord with those of nature. The laws of nature exist. The spirit animating them is mathematics (Le Corbusier, 1964).
Le Corbusier thinks that the human beings are surrounded by proportions of all kinds: in nature, in human constructions, in events—multiple, countless series of proportions. Le Corbusier did not conceive regulating diagrams, as predetermined grids on which to base designs. They were to be used only after the design been drawn up to make the proportions more exact. He discovered a need for such diagrams. In a more detailed account of the discovery, Le Corbusier argues (1929):

I needed a regulating diagram: a diagram based on diagonals, for a diagonal can express the special character of a surface in a single line.

To Le Corbusier the relationship between aesthetic and functional considerations is a mathematical creation of the mind. It is the language of the architecture. The architect not only has adapted raw materials to the functional requirements of a project but also, transcending the requirements, has established relationship that stirs people’s emotions. When certain proportions are established, the work takes hold of us. Thus architecture is proportion—a pure creation of the mind.

In the mid-forties he invented what he called the Modular, a new measurement system to replace the foot and the meter. Le Corbusier (1973) says:

The Modular is a measuring tool based on the human body and mathematics. The modular is a working tool, a precision instrument attuned piano.

Le Corbusier defines the Golden Section according to the human body as a system of proportions:

The height of a man with arm upraised may be divided into segments at the points determining his position in space—his feet, his solar plexus, his head, his fingertips. These three intervals produce a series of the Golden Section (Le Corbusier, 1973).

The principle of the Golden Section is used to derive two series of dimensions from the human figure. One is based on the height of a standing man with upraised arm: 2.26 meters. The other is based on the height of this man measured from his feet to the top of his head: 1.83 meters. The Modular is a measuring tool based on the human body and mathematics. The modular is a working tool, a precision instrument attuned piano.

Le Corbusier believed that these concrete measures, directly related to those of the human body, would help architects adapt their structures to human requirements. With the help of his two series (in which only man’s height and upraised arm height have been determined by measuring) he has arrived at two sets of measurements which he believes in and which must suit all purposes (Rasmussen, 1987).

In the residential unit of Marseille, all scales in the entire building are derived from the figure, which not only gives the proportions of the human body but a number of smaller measurements based on the golden section. The boundary between the body and architecture is blurred in many of his works where either the scale figures take on mechanical, architectonic characteristics or the built forms have figural, human qualities. These attempts at blurring the distinction between architecture and the body seem to aim at overcoming the existential abyss which lies between an individual and the objects which compose her world. Le Corbusier is intent on making a clear formal connection between these realms, and his method of relating them has some potential implications with regard to the effects and significance of architectural form for the human inhabitant. These include the breakdown of a strict division between the living human presence and the inert passive object.

Vision: body/city

1) Vision

Vision is one of the most important means of architectural communications. While it is the basis for comprehending commonplace practical realities, it also can become a source for revealing profound mysteries. It plays a central role in determining form for designers generally and occupies a critical position within Le Corbusier’s idea. Philosopher throughout the ages have condemned the living conditions of their time and with reforming zeal have described the society of their dreams—the ideal city. Aristotle and Plato both wrote of the ideal town or city, self-supporting and controlled in size to provide a cohesive social unit best suited to the needs of the time. But this was in the context of a military aristocracy where the ruling class spent their lives in the sport of politics and war while the producers were condemned to the menial work of keeping them free from the sordid detail of living.

Thomas More’s vision of Utopias in 1515 describes fifty-four towns, each twenty-three miles apart. Of particular interest is his description of the Utopian town of Amaurote “built on the side of a hill covering some four square miles down to the river’s edge, with streets very commodious and handsome, twenty feet broad...(More, 1965).”

This was More’s vision of how the newly developing architectural idea could transform the fourteenth century hovels of London. It was a practical vision that could well have been possible within the technical and economic achievements of the era. It was, however, Utopian only because the will and power to accomplish it were lacking.

Like Howard and Matta, Le Corbusier developed the city as an expansion of architecture in order to resolve the functional problems of the city (Agrest, 1991). Le Corbusier’s concept of the planner combines two distinct images. One is the planner as scientist or technician—the man of reason who studies of the problem of the city, formulates clear solutions, and carries them out with an unswerving will. Thus urbanism is organized around certain problems to describe social disorder, certain means of solution in terms of form, and a solution by urban projects. The second is the planner as artist, the isolated man of vision whose insights are the most profound record of his nation’s spiritual life.

Central his work was his fervent desire that his cities and his buildings provide the appropriate framework to
satisfy human needs and interests, and to advance human ideals. He held and advocated enthusiastically throughout his life the strong belief that architects and city planners should be more than technicians, that they should take the lead in order for the new machine civilization to bring to people not only material things but social and spiritual progress and the real joy of living in this extraordinary century.

In Baroque architecture, geometry and mathematics assured truth and beauty of architecture at all levels; by relating man’s immediate perception of the world with absolute values, they became a tool for fulfilling architecture’s fundamental symbolic role (Perez-Gomez, 1983). Similarly, to Le Corbusier the machine becomes an idea, a major instrument of the world process and an icon of the Zeitgeist. He defined a house as a machine for living in, and sublimated practical concerns to the level of a sort of analogue of universal order. Le Corbusier looked upon liners, aircraft and cars as more genuine expressions of the times than the style bound creations of official architecture. Insisting on the importance of fusing the mechanical and the Classical, Le Corbusier (1977) argued that forms based on standards evolve towards perfection.

2) Technology

Le Corbusier firmly believes that one has to define the tasks and technologies appropriate to modern industrial conditions and then find the right forms (Curtis, 1992). Le Corbusier (1977) differentiates two extremes of procedure in architecture and city:

There are, in the flux of ideas that comprise these definitions, the two poles of architecture, which are: to construct buildings (realm of technique); and to embellish them and make them glorious, delightful, etc. (realm of sentiment).

Although he insists on the necessity of their simultaneous presence, he emphasizes on the primacy of techniques. I have said that the technical consideration comes first before everything and is its condition, that it carries within it unavoidable plastic consequences, and that it leads sometimes to radical aesthetic transformations (Le Corbusier, 1977).

Tafuri (1987) interprets Le Corbusier’s technology:

This machine, in spreading out and contracting, metaphorically revealing its functioning, becomes charged with mythical values. Le Corbusier seems already to know what Heidegger would later say on this subject, namely, that technology is in essence poetic, that production and poiesis share common roots.2

Le Corbusier introduced technological rationalism; the belief that architecture must be based on a firm knowledge of materials and mathematics, and the hope that it was a science which would necessarily advance as technology had done.

What does the technology mean to Le Corbusier? The most prevalent example of architecture’s assimilation of another body of knowledge is the long occurring relationship between architecture and science; a case of fields of knowledge separating and attempting new connection. Perez-Gomez (1983) has pointed out that the conceptual framework of the sciences, being incompatible with reality, is not suitable as an absolute for the study of architecture. He argues that architectural intentions shifted in relation to the changing cosmology brought in by Galileo and Newton, resulting in the algebraization or functionalization of architectural theory, which in turn becomes a set of operational rules. Architecture seeks a valid scientific methodology as Alan Colquhoun (1969) notes;

Those in the field of design who were—and are—preaching pure technology and so called objective design methods as a sufficient and necessary means of producing environmental devices, persistently attribute iconic power to the creations of technology which they worship to a degree inconceivable to scientist.

Giedion (1982) argued that modern architecture is a particularly favored modern art because it can use new building materials and technology to make simultaneous time and space palpable in houses and factories. In the Enlightenment, people have lost in imagination what they have gained in knowledge; people moderns are incapable, because of knowledge, of durable exaltation (Benjamin, 1957). The burst of sympathy was one way their ancestors experienced unity with others. It was a passionate union. That is, the Enlightenment has conceived of physical coherence. To Le Corbusier, a building seems to tell a story as complex as a modern novel. He wanted to make spaces that create a special kind of coherence due to the sequence of movement, movement through space building person to building. Le Corbusier and modern architects have sought to satisfy an Enlightenment craving: to live in a physically unfiable world. In purely visual terms, his idea is about an object’s integrity in terms of machine and technology. Coherence in design is freed of the engineering obstacles that imposed upon earlier buildings.

Le Corbusier draws attention to the technology as the marks of the modernity. In his works, we see modern technology used to make coherent structure—all the rooms flowing into one another, the building and its surroundings visually interwoven. In other words, they are integrated objects that can be sealed. The interweaving of modern and ancient is one of the basic ideas in Corbusier’s work, and the moral values of the machine through technology can be achieved harmony of natural order and right balance between individual and the public order of the state. Sennett (1991) argues that the modern experience of Cobusier’s city is pervaded by a fear of exposure to diversity and complexity, and thus the resulted products, the grid and skyscrapers, are horizontal and vertical alienation. Visual unity in a city characterized by formalism and functionality becomes a neutral space created by a fear of pleasure, a desire to
control the self, a striving towards a power. Therefore, the city signifies the dualistic experience of urban space: on the one hand, it represents a Protestant ethic of space, a social psychology of emptiness; on the other hand, it represents an aesthetic, by default, of capitalist rationality in terms of real estate values and functionality (Sennett, 1991).

3) Frameworks towards a city

Le Corbusier presents two arguments for his concept of planning, and those arguments represent very well philosophical modernism. They appear to justify a rational approach to solving urban problems through the use of geometry, statistics, engineering, and technology. Comparing the Parthenon to a machine and speaking in awe of the building’s divine mathematics, Le Corbusier rejects merely Rationalist theories which overstate the role of construction and denatures the comparison made between the columns and trees (Curtis, 1992). His two arguments are: one is a philosophical argument based on ideas about the mind, geometry, nature, and physiology; the other is an argument about the social problems resulted from the historical and demographical changes in cities. Le Corbusier (1977) argues that “A town is a tool.” The tool or frame for presenting his argument seems to be that of the technical tools of planning. Through all strategies, he uses to construct and privilege geometry, science, and technology against poetry, art, and politics.

Urban society can be understood as a complex system of communities. It is common to expect that urban people to belong to different communities simultaneously, to feel identified with different groups and to participate in them either continuously or from time to time. On some level, relative choice is present, though it is possible to narrow down the number of variables according to the paradigm used by the group. Kuhn (1970) identifies paradigm as “the entire constellation of beliefs, values, techniques, and so on shared by the numbers of a given community.” In addition, Kuhn (1970) explains further the term paradigm to denote:

one sort of element in that constellation of beliefs, the concrete puzzle solutions which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles.

To Le Corbusier, models and examples, as particular shared patterns of definition of form do not only maintain the society’s commonness, but also identify architects and planners as an independent working group from the global social community.

Le Corbusier criticizes Camillo Sitte’s artistic planning on curves and meanderers as the pack donkey’s way, and claims that man walks straight because he has an aim in view (Le Corbusier, 1922). Le Corbusier was planning not only a physical environment, but also a social utopia. Michael Foucault describes the utopia of a perfectly governed city, the most efficient and economical method to spread a disciplinary order in the seventeenth century’s image of a plague stricken town, where absolute control was maintained over segmented town (Boyer, 1983). Thus Le Corbusier combines two traditions into one original synthesis: one is the Saint-Simonian tradition which is the dream of society as the perfect industrial hierarchy; the other is Fourier’s phalanstery which is the society as the perfect community to pleasure and self-fulfillment. Organization and order thus find intense and appropriate expression: both are are integral parts of Le Corbusier’s ideal city for the Machine Age. In this sense, Le Corbusier intended to provide the city that enables to become distinct, to preserve itself within its own identities, to bind itself together. Foucault (1974) explains this representation rigorously:

Order is at once and the same time, that which is given in things as their inner law, the hidden networks that determines the way they confront one another.

Le Corbusier wants to establish a certain set of models which are used as valid examples of form and space independent of existing environments. In Ville Radieuse his pyramid of natural hierarchies was intended to give the human structure of organization the same clarity and order as the great skyscrapers of business center. The beauty of organization is the product of the perfect cooperation of everyone in the hierarchy. Men at work create a world which is truly human. But the world is a realm of freedom where man lives in accord with nature. If the city were to be become a human city, it would be a city without classes (Le Corbusier, 1964).

Le Corbusier formed a new paradigm, and then established a new social paradigm. The model or city that he proposed turns out to be a reduction of totality into certain principles about the definition of form. Through the belief in the paradigm the validity of the model is left unquestioned. Under these circumstances the formal product of the architects or planners—is always a simplification of the complex set of formal choices.

Thus it is a utopia, an idealized situation, both socially and formally. The city, radically seen from his point of view is a framework for an ideal man. Using the idea of ideal man, Le Corbusier is a typical idealizer of a rather specific type of man: the average man. It was called average, not because it was considered to be the prototype of a society of equals, but because he was more or less a median example of the entire constellation of individuals. Because of the average man point of view of the Modern Movement it was believed that block dwellers would be equal, or mold themselves to be equal, every where around the world. It is amazing how a minimum lack of understanding of individual differences between people could propagate the repetition of a standard unit and a standard block from one place into another place.

4) Body metaphor in Ville Radieuse

Frameworks are schematic formal solutions imposed, overlaid or attached to the existing city. In order to analyze them it is possible to depict some of their parts...
the horizontal axis. Le Corbusier (1977) mentions what Cartesian axes; relations among all the urban parts of that comprise it in respect to the double system of the civilization (Le Corbusier, 1982). The etymological root, they are in the hierarchy of civilization. To him where geometry is prior to experience and reason, and thus knowledge with what is first. Therefore he presupposes that geometry is the means, created by ourselves, whereby we perceive the external world and express the world within us. Geometry is foundation. He identifies what he takes to be the foundation of knowledge with what is first. Therefore he presupposes that geometry is prior to experience and reason, and thus its posterior realization through building is privileged. The more cities mirror geometry, the more privileged is the postmodernity of city planning that when Le Corbusier sees the body acted as the central referent: its shape informed the layout of the Ville Radieuse (Vidler, 1994). The plan spliced together an extendible linear city with abstract image of a man: head, spine, arms and body. The skyscrapers were arranged at the head, and the body was made up of acres of redents—semi—enclosing areas of greenery—provide all the housing. To counter the potential monotony of using a single repetitive residential type, Le Corbusier proposed to set out the blocks in varying configurations, which, counter pointed by the modular street grid, would allow infinitely varying vistas. The provision of Le Corbusier’s essential joys (sun, space and greenery) underpinned the design of residential areas. The whole arrangement was intended to open up day-to-day living to sunlight, fresh air and greenery in a way which was quite impossible in the narrow streets of the medieval city, or even the wider streets of the 19th century city.

Le Corbusier attempts to show that there are direct links between geometry such as right angle, straight lines, and diagonal lines. Le Corbusier believes that simple geometry is dominant in our everyday life. If we go indoors to work, the office is square, the desk is square and cubic, and everything on it is at right angles, the hours of our day are spent amid a geometrical spectacle, our eyes are subject to a constant commerce with forms that are almost geometry (Le Corbusier, 1977). Corbusier’s argument is based on the primacy of geometry for perceiving and building. Le Corbusier (1977) argues that geometry is the means, created by ourselves, whereby we perceive the external world and express the world within us. Geometry is foundation. He identifies what he takes to be the foundation of knowledge with what is first. Therefore he presupposes that geometry is prior to experience and reason, and thus its posterior realization through building is privileged. The more cities mirror geometry, the more privileged they are in the hierarchy of civilization. To him where the orthogonal is supreme, there we read the height of a civilization (Le Corbusier, 1982). The etymological root, ortho, means straight and upright.

The Ville Radieuse is the structure itself of the relations that comprise it in respect to the double system of the Cartesian axes; relations among all the urban parts of functions along the vertical axis, inside each part along the horizontal axis. Le Corbusier (1977) mentions what an axis is:

An axis is perhaps the first human manifestation; it is the means of every human act. Architecture is based on axes. Arrangement is the grading of axes, and so it is the grading of aims, the classification of intentions. Merleau-Ponty describes da Vinci’s Treatise on Painting for generating axis:

The secret of the art of drawing is to discover in each object the particular way in which a certain flexuous line, which is, so to speak its generation axis, is directed through its whole extent (Merleau- Ponty, 1964).

According to Merleau-Ponty, the discovery of single flexuous line is a creation of an invisible from the visible. It henceforth becomes a means by which the object may be seen. It is a source or genesis of a thing which is latent in all its prosaic appearances or arises and falls through the whole extent of the ways in which the entity can make itself visible and is that around which such contingent traits are disposed as its radiations. In this sense, Le Corbusier tried to search for original language to express the relation between the invisible and the visible.

The plan of the Ville Radieuse seems much less hierarchically organized than that of the earlier project; however, there is a hierarchical organization of its functions, which is expressed in a biological analogy. Le Corbusier’s very notion of architecture is itself, like that of Alberti (perfect symmetry), on the body, and thus the body acted as the central referent: its shape informed the layout of the Ville Radieuse (Vidler, 1994).

The plan spliced together an extendible linear city with abstract image of a man: head, spine, arms and body. The skyscrapers were arranged at the head, and the body was made up of acres of redents housing strips laid out in a stepping plan to generate semi-courts and harbours of greenery containing tennis courts, playing fields and paths (Curtis, 1977).

Le Corbusier had preoccupied with the idea of the geometrical and the natural as analogous—both offering systems of structured (hierarchical) ordering—and as necessary complements. The geometrical order established by the grid is played off against the natural order expressed in the biological analogy—the business center is the head and nerve center, the residential areas from the lungs, the heart is the cultural center and feet are formed by heavy industry. The biological analogy leads to the separation of functions or organs. Le Corbusier (1964) makes this his keynote:

A plan arranges organs in order, thus creating organism or organisms. BIOLOGY! The great new word in architecture and planning. The biological analogy extends so deeply into the forms of the city planning that when Le Corbusier sees the topography as a female body in the Rio de Janerio, he introduces curvilinear forms into his city planning.

Francesco di Giorgio Martini extended the anthropomorphic conception to the body of the city, in which a
male figure is inscribed and in which the fortress, as the most noble member is located at the position of the head (Agrest, 1991).\(^1\)

In Di Giorgio, the center of the city, based on the configuration of man’s body, gives subsistence, like a woman’s boy, through the umbilical cord from the womb to the rest of the city. In one case men’s fantasies of conception and reproduction are placed in the figure of the architect, in the other they are set in the principles organizing the formal configuration of the city (Agrest, 1991).

Thus the classic architectural project of the city as a body is reflected to Ville Radieuse in the mirror of a totally formed, closed, and unitary system. Aside from the distortions induced by such anthropomorphic metaphors the linear model was strictly adhered to thereby allowing less hierarchic zones to expand independently of each other. Zoning becomes the basis of life, culture, is solidified in the new form of the city. Eternal human activities are distributed over large geographical areas.

In terms of Corbusier’s physiological relationship in Ville Radieuse, the logic of parts and wholes functions most visibly. Simple objects are those which have no parts, complex those with parts. Corbusier’s city—complex objects—are wholes with parts. Wholes are composed of parts that permeate each other. Parts are inseparable from one another and from their wholes. Thus one can perceive complex objects, and one can abstract from complex objects to formal categories of wholes and parts. To Le Corbusier, the logic of parts and wholes concerns the constitution of objectivity within subjectivity. It describes the ways in which parts are blended according to rules in such a way as to structure given regions of reality. Since the blending of parts is law-governed according to the abstract image of man and zoning, it may be understood scientifically, and objectively. Through an eclectic mixture of organicism, technology, and geometry, Le Corbusier shows with more precision what that totality is: in the case of verbal meaning, the physical world is founded on the meaning. A physical world is not a word except as a moment of a greater whole. It has the dependent, founded sense of a part that cannot exist alone.

**Conclusion**

The building no longer simply represented the whole or a part of the body, but was seen as objectifying the various states of the body, physical and mental. The link between the body and architecture is not merely the superficial transmutation of physiological parts into building elements, i.e. using the mouth as a metaphor for an entry of dealing with windows as if they were eyes. It is rather, the active engagement of the nature of our body, of a particular body image and its transformation into built form.

‘The body is the explosion, the fragmented unconscious, where the architectural body does not reflect the body of subject, but instead reflects the perception of the fragmented body as the built text, a set of fragments of language and texts, the city (Agrest, 1991).

First, Le Corbusier defines that the city of the future would be a Radiant City of glass and steel-skyscrapers set in parks; it would be an efficient and beautiful center for the great bureaucracies whose total administration of society would bring the order and harmony he sought. Harmony, regulating everything around us, is his ultimate quest. For this notion (geometric order), he first simply used anthropomorphic metaphor. This is evident from his expiatory sketches of the period which show the isolated head of the skyscrapers above the heart of the cultural center, located between the two halves or lungs of the residential zone. In addition, the theme of right angle was used to the city as a park, and to a rectilinear grid. It is drawn within a strict, rectangular grid.

Secondly, Le Corbusier identifies the body that directly influences the production of architecture. When we set out to make the architectural artifact, our body stands between the idea within us and its formalization in the world. In a sense, the body acts like a kind of filter influencing the final form of the object by projecting its own nature into the artifact. Le Corbusier inscribed at the head of his plans: “These studies rest on an inalienable unquestionable truth that is fundamental to all plans for social organization: individual liberty (Le Corbusier, 1964).” That this motto adorns a proposal for a completely planned society provides an important insight into Le Corbusier’s way of thinking. He pursued the combining of seemingly irreconcilable elements into a logical, coherent, unexpected but inevitable whole.

Finally Le Corbusier’s plan of the city is its real constitution. It not only symbolizes the harmony of the society, it also creates harmony. It is the fundamental level of social organization. Unlike in the Renaissance in which body was a divine image, the planner plays the role of philosopher-king for human will. Only he can bring society into accord with the cosmic laws of order and create that healthy social equilibrium which Le Corbusier called harmony and Plato called justice.

**Notes**

1 Originally Le Corbusier placed the average man’s height at 175cm. To get this figure, he divided according to the golden section rule and got 108cm. Like Leonardo da Vinci and other Renaissance theorists he found that this corresponds to the height from the floor to man’s navel. But he learned that the average height of English policemen was six feet, or about 183cm. He actually has not followed the scientific method of measuring things to determine the extreme limits for their dimensions (Rasmussen, 1987). The Modulor is a system of proportional dimensions that reflects the Golden section. The formulor used to establish the Modulor is the well known a=b(a+b) where a and b are lengths related in what the Greeks considered to be the most pleasing proportion. The Modulor subdivides the height of a man into two proportional dimensions: from waistline to the soles of feet (a); and from waistline to top of head (b).

2 To Heidegger, the word techne means and denotes rather a mode of knowing. To know means to have seen, in the widest sense of seeing, which means to apprehend what is present, as such. Techne
is a bringing forth of beings in that it brings forth present beings as such beings out of concealedness and specifically into the unconcealedness of their appearance; techne never signifies the action of making (Heidegger, 1977; Tafuri, 1987).

3 In addition, Vitruvius had demonstrated that the human body is structured by geometrical relationships, principally by the bilateral symmetries of the bones and the muscles. The ears and the eyes. By studying these symmetries, Vitruvius showed how the body's structure could be translated into the architecture of a temple. In Pantheon, it is believed that the central floor lines are considered as the building's spine, the large niche as its head.

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