# Architecture: Perception and Concept
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## Abstract

We have neglected the gift of comprehending things through our senses. Concept is divorced from percept, instigating thought to stray among abstractions. The inborn capacity to understand through the eyes has been put to sleep and must be drastically reawakened. The main thesis of this short essay isthat the appearance of things depends on its place and function in an overall pattern. All perceiving is also thinking, all reasoning is also intuition, and all observation is also invention. So, the architect's conceptions are an instrument of life, a refined way of understanding who and where we are.

Keywords: *experiencing architecture, spatial features and expression, functionalism, pluralism.*

## Introduction

Our eyes have been reduced to mere instruments by which to identify and to measure; hence we suffer equally from a paucity of ideas articulated in images and from an incapacity to discover meaning in what we see. Naturally we feel lost in the presence of objects that make sense only to undiluted vision and we seek refuge in the more familiar medium of words. The inborn capacity to understand through the eyes has been put to sleep and must be drastically reawakened.

The architect uses his categories of shape and colour to capture something universally significant in the particular.The history of the past and the experience of the present provide many examples of the destruction wrought by formulas and recipes. Groping in vagueness is no more productive than blind adherence to rules.Unchecked self-analysis can be harmful, but so can the artificial primitivism of the person who refuses to understand how and why he works.

All seeing is in the realm of the psychologist, and no one has ever discussed the process of creating or experiencing architecture without referring to psychology. Some architect theorists use the findings of psychologists or leftovers from theories of the past to their advantage.  Or they limit their approaches to what can be measured and counted and to concepts they have derived from experimental or psychiatric practice.

Good architecture must have its own language that should differ from the talk of painters and sculptors.Seeing is entirely a subjective imposition of shape and meaning upon reality. Looking at the world proved to require the interplay between properties supplied by the object and the nature of the observing subject. Vision is not a mechanical recording of elements but rather the apprehension of significant structural patterns.  If this was true for the simple act of perceiving an object, it would all the more be likely to hold also for the artistic approach to reality.

Perceptual shape is the outcome of an interplay between the physical object, the medium of light acting as the transmitter of information, and the conditions prevailing in the nervous system of the viewer.  The image is determined by the totality of visual experience we have had with that object or with that kind of object during our lifetime, and that object is depicted by the spatial features that are considered essential.

The appearance of objects is influenced by that neighboring object in space, so it is also influenced by sight that preceded it in time.One may find a sculpture simple because he is unaware of its intricacy; or he finds it confusing and complex because he is unaware of its intricacy; or he may be puzzled only because he is not accustomed to a new, modern style of shaping things.

## Simplicity as an overarching order

In order to grasp simplicity, one must be able to understand an order that dominates an enormous world of active forces.Every great architect gives birth to a new universe, in which familiar things look as if they have never before been looked like to anyone.

Subtle complexity can be explained by combining geometrically simple shapes; and the combination, in turn, held together by a simplifying orderliness. Its elements are as simple as can be found anywhere in a work of architecture. The composition consists of one angular and complete circle plus a number of rectangular shapes.

The close approximation of proposition and location produces considerable tension by compelling the architect to make subtle distinctions.Every design carries meaning. Whether representational or abstract, it is a statement about the nature of our existence.

A useful object such as a building interprets its function to the eyes and also the relation between the image seen and the statement it is intended to convey. However any structure which exactly corresponds to the intricate structure of the thought to be expressed has a welcome simplicity, whereas any discrepancy between form and meaning interferes with simplicity.

The character of the meaning and its relation to the visible form intended to express it helps to determine the degree of simplicity of the whole work.The discrepancy between complex meaning and simple form produce something quite complicated. Simplicity requires a correspondence in structure between meaning and tangible pattern, what we call isomorphism, which is required in the design; otherwise, we would be deprived of a desirably simple correspondence between form and function. The simplification of form would diminish communication.

To see shapes is not enough. If visual shapes are to be useful, they must correspond to the objects out there in the physical world. The eyes receive information only about outer, not inner, shapes. In the work of architecture, the subdivision of visual shape is necessary to facilitate practical orientation.

When shapes are less clear-cut and more complex, the structural components are not so obvious.Mistakes in the comprehension of an architectural structure are easily made when a viewer judges by relations within narrow limits rather than taking into account the overall structure. The appearance of any part depends on the structure of the whole, and the whole, in turn, is influenced by the nature of its parts.

## Similarity and Differences:

Similarity and subdivision are opposite poles; whereas subdivision is one of the prerequisites of sight, similarities can make things invisible like a pearl on a white forehead. Similarity acts as a structural principle only in conjunction with separation, namely as a force of attraction among segregated things. Aristotle thought of similarity as one of the qualities creating mental association, a condition of memory, linking the past with the present. To demonstrate similarity independently of other factors, one must select patterns in which the influence of the total

structure is weak, or at least does not directly affect the particular rule of grouping to be demonstrated.

Any shape, brightness, colour, spatial location or movement can cause grouping by similarity. Simplicity is a prerequisite for the noticing of differences. One step beyond the mere similarity of separate units is the grouping principle of consistent shape. This principle relies on the intrinsic similarity of elements: a line, surface, or volume.The more consistent the shape of the unit, the more readily it detaches itself from its environment. When there are no intervals between units, a compact visual object results.

The images formed by the lenses of the eyes are picked up point by point by millions of tiny retinal receptors whose messages, although bunched to some extent before they reach the brain centers, must be grouped into objects for the purpose of perception.Object formation is accomplished through the principle of simplicity, of which the rules of similarity are a particular application.

## The Structural Skeleton

All works of architecture have to be looked at with a primary grasp of the total organization. At the same time relations among the parts often play an important compositional role. Although the visual shape of a building is largely determined by its outer boundaries, the boundaries cannot be said to be the shape.  In speaking of shape we refer to two different properties of a visual object: (1) the actual boundaries produced by the architect: the line, masses, volumes; and (2) the structural skeleton created in perception by those material shapes, but rarely coinciding with them.

In designing a building, the first thing to grasp is the contrast of its principal lines; one must be well aware of this before one sets pencil to paper.The architect must bear in mind the structural skeleton he is shaping while at the same time paying attention to the quite different contours, surfaces, volumes, he is actually making.

## Form

Visual material received by the eyes, organizes itself so that it can be grasped by the human mind. Form is the visible shape of content. A shape is never perceived as the form of just one particular thing.There is no difference between the physical object and the image of it perceived by the mind; the mind sees the object itself.

The visual concept of anything that has volume can be represented only in a three-dimensional medium, such architecture or sculpture. Visual form can be evoked by what is seen, but cannot be taken over directly from it. Image making requires the use of representational concepts.Representational concepts furnish the equivalent, in a particular medium, of the visual concepts one wishes to depict, and they find their external manifestation in the work of the pencil.

Every beginner in architecture finds that the simplicity of the cubic concept imposes itself upon his work and tries to abandon it in favor of the kind of roundness that was achieved during the Renaissance; he has to overcome the Egyptian in himself.

In order to record images of the same object, the two eyes must make the lines of sight converge. The angle formed by the eye axes is large when the object is close by and becomes smaller with increasing distance. The changing tension in the muscles that hold and move the eye balls is correlated to distance by the nervous system. The convergence is activated, of course, by the tendency to make the two images coincide and thereby to simplify the perceptual situation.

Similarly, the kinesthetic sensations from the ciliary muscle that controls the curvature of the crystalline lens in the eye, are used by the nervous system as an indirect indicator of distance. This focusing device is steered by the gradient from a blurred to sharp image in the visual field.

When we abandon the parallelism of isometric perspective and add size variation as a further indicator of the third dimension, we obtain correspondingly stronger depth effects. In this case the more distant edges of the figure are shorter than the closer ones. This ability of the sense of sight to straighten out the deformed projection and to perceive it as an obliquely oriented, right angular object is commonly ascribed to the constancy of size and shape.

This term has some misleading connotations. It is often taken to mean that despite the projective deformations, visual objects are seen according to their objective physical shape. The objects are said to remain constant. There is some truth to this observation, but it does not hold as universally as it pretends to, and it substitutes a secondary principle of explanation for the primary one. It is essential for the architect to realize that the constancy of size and shape depends on the tendency towards simple shapes, which may or may not produce a truthful percept.

In the Palazzo Spada in Rome, when Francesco Borromini rebuilt the Palazzo around 1635, it was his intention to have a deep architectural vista tapering off in a vaulted colonnade. As an observer stands in the courtyard and looks into the colonnade, he sees a long tunnel, flanked by columns and leading to an open space in which he notices the fairly large statue of a warrior. But as soon as he walks into the colonnade, he experiences a strong sensation of seasickness, caused by a loss of spatial orientation.

Borromini had only a limited site at his disposal, and the colonnade is actually short. It measures about 8.40 meters from the front most arch to the back one. The front arch is almost 5.70 m., and 3.00 m. wide. The back arch is reduced to a height of 2.00 m. and a width of about 0.90 m. The side walls converge, the floor rises, the ceiling slams downward, and the intervals between the columns diminish. As the observer reaches the statue of the warrior, he is surprised to find it quite small.

There are other examples. St. Mark's Square in Venice is 81.00 m. wide at the east end, but only 55.00 m. at the west. The lateral buildings, the Procurative, diverge toward the church. Thus standing in front of the church on the east side and looking at the 56.00 m.long piazzalong, the observer finds the vista much deeper than from the west side. Medieval architects increased the depth effect in many churches by making the sides converge slightly toward the choir and gradually shortening the intervals between columns.

The opposite device maintains regularity against the distorting influence of perspective and shortens apparent distance. This is true for the quadrangle formed by Bernini's colonnades on St. Peter's Square in Rome and Michelangelo's Square in front of the Capitol.Both converge toward the approaching observer. According to Vitruvius, the Greeks increased the thickness of columns at the top in relation to that of the bottom in a ratio that increased with the height of the columns. For the eye is always in search of beauty, and if we do not gratify its desire for pleasure by proportionate enlargement in these measures and thus make compensation for ocular deception, a clumsy and awkward image will be presented to the beholder. Thus if the architects were to give the true proportions of their works, the upper part which is farther off, would appear to be out of proportion in comparison with the lower, which is nearer, and so they give up the truth in their images and make only the proportions which appear to be beautiful, disregarding the real ones.

When buildings are to be high and there is not much space below to enable one to go far enough off to view them at a distance but is forced to stand almost under them, they must be made taller; that which is added in height comes to be consumed in the foreshortening, and they turn out, when looked at, to be really in proportion, correct and not dwarfed but rather graceful.

Aerial perspective relies on gradients of brightness, saturation, sharpness, texture, and to some extent of hue. In nature, the phenomenon is due to the increasing body of air through which objects are seen.

- All visual appearance owes its existence to brightness and colour.
- The boundaries determining the shape of objects derive from the eye's capacity to distinguish between areas of different brightness and colour.
- Shape lets us distinguish infinite number of different individual objects.
- Isomorphism, that is, the structural kinship between the stimulus pattern and the expression it conveys,can be shown in simple curves. If we compare a section of a circle with a section of a parabola, we find that the circular curve looks more rigid, the parabolic one more gentle. What is the cause of this difference? It derives from the geometric structure. The constant curvature of the circle obeys a single condition: it is the locus of all points equidistant from one center. A parabola satisfies two such conditions. It is the locus of all points that are equidistant from one point and one straight line. Because of this twofold dependence the curvature of the parabola varies, that of the circle is constant. The parabola may be called a compromise between two structural demands. Either condition yields to the other. In other words the rigid hardness of the circular line and gentle flexibility of the parabola can be derived from the inherent make-up of the two curves.

In the outline of the dome that Michelangelo designed for St. Peter's in Rome, we admire the synthesis of massive heaviness and free rising. This expressive effect is obtained in the following way. The two contours that make up the section of the outer cupola are parts of circles, and thus possess the firmness of circular curves. But they are not parts of the same circle. They do not form a hemisphere. The right contour is described around the center, the left around another center. In a Gothic arch the crossing of the curves would be visible at the apex. Michelangelo hides it with the lantern. In consequence, both contours appear as part of one and the same curve, which however do not have the rigidity of a hemisphere. It is a compromise between two different curvatures and thus appears flexible as a whole while preserving circular hardness in its components. The total contour of the dome appears as a division from a hemisphere, one that has been stretched upward. Hence the effect of the vertical striving. Michelangelo's dome thus embodies the paradox of the baroque spirit in general.

## The Priority of Expression

We think of perception as the recording of shapes, distances, hues, motion. The awareness of these measurable characteristics is actually a fairly late accomplishment of the human mind. It is the attitude of the scientist and the engineer who estimates the size of the customer's waist, the shade of the lip stick, and the weight of the suitcase. Any organism is developed to aid in reacting to the environment, and any organism is primarily interested in the forces active around it – their place, and strength, and the perceived impact of forces makes for what we call expression.

If expression is the content of vision then it is the way architects look at the world. The expressive qualities are the means of his communication. His attention enables him to interpret his experiences and they determine the shape of patterns he creates. Therefore, training students of architecture should be consisted basically in sharpening their sense of these qualities and focus on expression as the guiding criterion for every stroke of the pencil. Here the idea of creation can be conveyed by what strikes the eye and continues to organize the composition in examining its details which arouses in the mind a corresponding configuration of forces. The forces that characterize the meaning which come alive in the observer and produce the kind of participation that distinguishes artistic experience from the detached acceptance of information.

Consequently, the visual form of a work of architecture is neither arbitrary nor a mere play of shapes and colours. It is indispensable as a precise interpreter of the idea the work is meant to express. Similarly, the subject matter is neither arbitrary nor unimportant.

Each successful work presents a skeleton of forces whose meaning can be read as directly as that inherent in Michelangelo's story of man. Such abstract art is not pure form because we have discovered that even the simplest line express visible meaning and is therefore symbolic.

The human mind receives shapes, and interprets its image of the outer world with its conscious and unconscious powers, and the realm of the unconscious could never enter our experience without the reflection of perceivable things. There is no way of presenting the one without the other.

## Egyptian and Classic Architecture

Order and constancy indicate the aim of Egyptian architecture. The Pharaoh was a symbol of absolute character of man-nature totality and not a tyrant. Egyptian architecture achieved a process of abstraction and is considered the first integrated architecture symbol system in the history of architecture. Their architecture is axially disposed which is a distinguishing phenomenon to fulfill the creation of a constant internally valid environment.Their decorations never threatens the integrity of the general form and they enhanced the crystalline quality of the plastic element which gave the buildings certain flavor. Hardly any other country has structures of such simplicity. This gave the sense of identity and security. The Egyptian tombs and temples were the primary building tasks of ancient Egypt.

The tombs were oriented due east to be seen between the two halves of the pylon and the door became the gate of heaven through which emerges the Pharos. The arrangement of the temple consists of three parts, a colonnaded courtyard, a hypostyle hall and a sanctuary all arranged along an axis. The court is open to the sky; the halls have ceilings decorated with painted stars. The floor rises and the ceiling drops down, the sanctuary is at the end of the axis. This arrangement represents the path of life which leads to a return to the origin and the fundamental intentions, the enclosed oasis, the durable megalithic mass, the orthogonal order and the path of axis which represent the Egyptian cosmos. The preference was for ordered and formalized relationships.

The most wish of Egyptian articulation is in the rich variety of columns which are derived from plant forms like papyrus and palm branches.Egyptian architecture possesses interior spaces which show a wish for being somewhere for they did not dwell in these spaces but represented a stage for an eternal wondering. Their internal spaces are smaller than the volume of the masses. They are fragmented and do not give the feeling of calmness but a feeling of wondering.

On the other hand, Greek buildings are regarded as non-architectural, large sculptures because of their lack of space concepts.Their temples are regarded as aesthetic objects;as a manifestation of archetypal character to be understood as a space within a space. The wish for visual refinements and free distributions gavea sense of philosophical concepts.

The only feature common to all temples is a longitudinal hall which house the statue.  Their temples are built according to their dedication.The general character of the Greek space is according to the different functions.  The Greek wanted a multitude of existential meanings.

Roman architecture is considered a degeneration of classical Greek architecture. Roman architecture is organized on a strict axial basis, making the axis the distinguishing property of its temples.In Rome, orthogonal and rotational elements are combined to form complex, axially organized totalities and the Roman axis is related to a center which is defined as a crossing of axes; this corresponds to the symbolism of the Egyptian path.

The Romans used extensive and varied interior spaces, grand interior spaces and complex groups of spaces which are covered with vaults and domes.The Romans used the classical orders in a new way to become decorations on the wall surfaces; Roman architecture is characterized by uniformity, systematic and functional.

## Early Christian

Symbolic spatial relationships were taken as the point of departure for the building of churches in the Early Christian epoch; that is, the concept of center and path.  The church was based on the longitudinal basilica, where a centralized space was used when the building task was a baptistery mausoleum or martyrium.  Decorative treatment furnished the whole interior walls to give the feeling of a qualitatively different world.

The church consisted of two major parts: the congregation space and the chancel; the idea was to bring these two elements together within the same interior space like those churches in the Holy Land which Constantine has erected. The aim is always to give spiritual space that gives the experience of entering heaven.  Although the spiritual center is the altar, it is rarely placed at the center, but it is placed at the end of the longitudinal path.  The spiritualization was enhanced by the introduction of the arcade, and by changes in proportion and the longitudinal rhythm.  The heavenly dome was introduced in the churches in the fifteenth century.  The cross plan is integrated in the plan of most churches with the dome atop the intersection of the cross to represent heaven as a cosmic symbol.

## Romanesque Architecture

The property of Romanesque buildings is their composition of massive shape and verticality.  The bell tower became an important feature in the history of architecture and is intended to prevail. The towers' round, square or octagonal shape served to reinforce the city walls.  The towered facades of medieval churches related to this symbolism.These towers were combined with the longitudinal basilica.  The introduction of long and narrow naves were for the desire to express human participation.

After the fall of Roman Empire especially after the expansion of Islam during the seventh century, urban civilization degenerated.  Down to the eleventh century the monasteries gave rise to the formation of new settlements inhabited by craftsmen with their families surrounding these monasteries.  These monasteries were isolated from each other, and as a result there was a unity

of European culture in spite of political division. The monasteries were not a refuge from the world, but a vital part of it, and the world was experienced from the inside out.

In the Early Christian basilica, the arcade belonged to the interior and by applying it to the exterior has weakened its original massive and enclosed character. This process was to culminate in the skeletal structures of Gothic architecture.The early Christian architecture represented man who turned inwards to find God and his want to bring God to the world.

## Gothic Architecture

In Gothic churches, symbolic dematerialization is replaced by dissolution of the wall and it becomes transparent to interact with the environment.At the same time, transparency offered a new interpretation to Christian light symbolism and the growing wish to interaction with the environment gave importance to movement in depth with the portal as a deep, inviting path. This gave the town a meaning of an organism where the town is the hard shell and the church the delicate core with its architecture, sculpture and painting were unified to be the greatest achievements in the history of architecture.

In the design of Gothic cathedrals there was no predetermined law of progress, but there is a law of stylistic evolution. The Evolution required development of techniques; for example the invention of the rib vault and the flying buttress made it possible to lighten vaults and walls, which were massive in Romanesque Cathedrals. Thus, the development of forms was bound to be in the direction of substituting glass for stone while concentrating stresses upon the skeleton as in Gothic Cathedrals. This has been achieved by the use of materials and techniques for the desire to get more light and reducing the mass of the skeleton itself.

## Renaissance Architecture

Renaissance style is considered a break with medieval architecture.This break is clearly visible in Brunelleschi's building, the Sacrestia Vacchia of S. Lorenzo in Florence (1420-29). Three important properties can be signaled in this building: 1) the introduction of anthropomorphic classical members, such as Corinthian pilasters, Ionic colonettes and a fully developed architrave;2) the exclusive use of elementary geometrical relationship; and 3) a strong emphasis on spatial centralization. Thus medieval architecture has been replaced by a simple addition of independent spatial and plastic elements. After Eighty years in time, Bramante's Tempietto in S. Pietro in Manoto in Rome (1502) has the same properties of Brunelleschi's building of S. Lorenzo. These two buildings reveal the birth of important classical properties.

The main way in which it differs from the earlier work is in a stronger emphasis on the plastic character of the members; whereas the Sacrestia Vecchia still reflected the skeletal structure of medieval buildings, the Tempietto appears as plastic body.In both examples the space of the Middle age had given way to a conception of space as a concrete container.Renaissance space shows a homogeneous geometrical order with harmony and perfection as absolute values.

## Mannerist Architecture

After the perfection of the 14th Century, the architecture of the following century appears as its antithesis where harmony and order are gone, and the forms become charged with tension, conflict and experiment. Three important innovations made in Mannerist Architecture: 1) a deliberate development of a new building type, 2) a new active interplay between man-made and the natural environment; and 3) A new dynamic organization of interior spaces. The spatial disposition is based on two orthogonal axes which define the main directions of the site. Where

the axes intersect, there is a circular cortile which forms the center of the whole composition. In this sense the 15$^{th}$ Century architecture initiated the modern approach to life and art.

Exterior space was made expressive and dynamic, and single active elements were gradually integrated into a coherent system. This implies that the space between the buildings became the most important constituent element of the urban totality. Mannerist space is characterized by a simple, directed movement in depth, as demonstrated in the Uffizi palace by Vasari. The interest in the character of place and the relationship between a building and its surroundings made the villaa building type of primary importance.

Mannerist architecture is based on the Renaissance concept of homogeneous space, but in a certain sense contradicts it. The 15$^{th}$ Century stressed the aspect of isotopic, static order, and developed the possibility of differentiated dynamic spatial succession: a space less of a direct expression and morean object of emotional experience. The basic constituent fact of Mannerist architecture is actually the phenomenization of abstract, symbolic space.

## Baroque Architecture

Baroque architecture is a synthesis of dynamism and systematization. The two are contradictory aspects of the Baroque phenomenon;systematization and dynamism formed a meaningful totality. Baroque architecture is an architecture of inclusion and aims at a great synthesis. Both the systematic organization of Renaissance space and Mannerist dynamism are integrated. Baroque inclusion is a synthesis of mass; movement and rest, enclosure and extension, proximity and distance, power and gentleness, dignity and delicacy, illusion and reality, to predict a new and deeper understanding of the human psyche.

Art was of central importance. Bernini insisted to make St. Peter's square one of the greatest urban spaces ever conceived. The square interacts with the world by its oval shape that is simultaneously closed and open, an intention also expressed in the transparent colonnade to become a meeting place for mankind that functions as the principal focus of the Catholic world.

The Baroque building is made by interacting spatial elements according to outer and inner forces. The great innovation was the idea that space does not surround architecture but is created by it. Baroque space is meant to be as a testing ground for the development of advanced spatial ideas.

Guarino Guarini (1624-83) composed complex plans with interdependent or interpenetrating cells, and introduced energetic forms resembling pulsating organism which give the Baroque ideas of extension and movement a new dynamic and vital interpretation as in the church of S. Lorenzo in Turin (1668), where a centralized plan is developed around an octagonal space whose sides are convex by being curved towards the inside. A transverse oval presbytery is added to the main axis, according to the principle of pulsating juxtaposition. His idea was a fundamental importance for the late Baroque architecture of Central Europe. Towards the end of this period a more static centralized plan became usual and the late Baroque Church thus ended as a receptacle of Divine Light.

The most important development in Baroque architecture was the undulating wall introduced by Borromini.The undulating wall was applied later to the open spatial groups of Guarinesque architecture where it appears as a continuous enveloping skin, as in a chapel in Simirice in Bohemia (1700) by Christophe Dientzenhofer.

Architects of this time were sensitive to the effects of texture, colour and light as well as water and natural elements to give their spaces any desired character. In general, phenomenization led

towards dissolution of the archetypal characters of the classical tradition.Baroque Architecture concluded a period of Western Architecture which is called the age of humanism.Baroque Architecture, as Descartes remarked, is characterized by active participation of the anthropomorphic members in a dynamic spatial system.

## Enlightenment

Around 1750 the industrial and social revolutions confirmed the decline of the Baroque systems and the old world. Three symptomscharacterize the creations of the new situation: 1) the arbitrary use of architectural forms borrowed from the past as an attempt to concretize new meanings to replace the traditional symbolic walled town and church;2) A new kind of architecture related to the new industrial revolution technology demanded that architecture ought to regenerate through primitive geometry such as the pyramid, cone, cylinder and sphere; and 3) The truly creative work of the period were structures of iron and glass. This technique made the development of the skyscraper possible.

In that period the styles represented a cultural heritage of possible meanings.Art Nouveau was an outgrowth of the feeling for dematerialized structure and transparent space.In the work of Antonio Gaudi the organic quality of the Art Nouveau is given a different plastic interpretation with a sound and imaginative technical basis.

For the first time in history architecture had become a truly three dimensional problem and for the first time in history the most advanced architectural ideas were used to solve the problem of the dwelling for every man where everybody may find his place within an open totality.The nineteenth century preserved the belief in natural harmony and in man's ability to discover its laws and that a healthy society forms an integral part of an open world.

## Functionalism

The modern period is distinguished by simple shapes wrapped up by a weightless skin of glass and walls; lacking details of decorations so as to be called a transparent structure.  An architecture born in the nineteenth century with a return to elementary shapes and geometric relationships instituted the principle of functionalism; a principle introduced by Sullivan and Wright. Wright destroyed the traditional box to achieve a dynamic interaction of interior and exterior space. He wanted his houses to create an architecture of democracy.

Those who shared this principle of functionalism considered themselves exponents of a modern movement.The modern movement believed in scientific analysis which might secure a well ordered society.Functionalists' desire was for a free plan with light on the facades of the buildings and relationships between skeleton construction, and open spaces.

Le Corbusier later developed the general concept into five points for the new architecture namely the *pilotis*, raise the building above the ground to allow free circulation, a roof garden to give back the ground lost under the building, a free plan to allow use of space, continuous windows to be in contact with nature and to allow the façade to be opened or closed at will.  This can be seen in Villa Savoye, Poissy (1928) and the Pavilion Swiss, Paris (1930) and the Unité d'Habitation in Marseilles, where two double height apartments are served by one corridor for every 3 floors.

Mies van der Rohe said that the free plan and a clear construction cannot be kept apart. The structure is the backbone of the whole and makes the free plan possible. Mies's handling of space includes the treatment of corners, joints and the choice of materials and texture. For him the

important thing is the play of reflections and not the effect of light and shadow as in ordinary buildings.

Adolf Loos declared in 1908 that Ornament is a crime and ornaments should be eliminated from edifices. Thus, the aim of Functionalists was to eliminate the traditional motifs and turn to the invention of new spaces with the avoidance of traditional motifs and ornament.   The Functionalism Architecture, therefore,easily degenerated in a machine-like juxtaposition of separate parts.

## Pluralism

The architecture of the last decade shows a growing diversity which became a visual chaos. It consists mostly of the repetition of unarticulated elements; man's environment became problematic. But, Alvar Alto suggested an organic approach to functionalism buildings by introducing natural materials and topological forms as seen in the Finnish Pavilion at the New York World's Fair in 1939. This organic movement was also inspired by the works of Frank Lloyd Wright such as Taliesin West (1938) and the Guggenheim Museum in New York (1946); this also implied a return to a closed form.

During the last two decades, a pluralism of technically founded formal structures has developed.It was started by the great works of Louis Kahn. In pluralist architecture the concepts of place, path, and domain became important.  The pluralist architecture is as a world within a world as Louis Kahn said. In Louis Kahn's situation, the problem of physical presence is combined with the problem of light, for Kahn has reestablished light as the giver of all presences.

Alvar Aalto operates with themes that are mainly functionally determined in the organic sense. The undulating shape of M.I.T. Senior Dormitory (1947) was determined by the intention to give each room a diagonal view across the Charles River. His church in Vouksennika was given a pattern that resembles a series of waves for acoustical reasons (1956). Thus the modern architecture has liberated itself from the general types and basic principles, and is in the process of realizing a true synthesis of freedom and order.

Pluralism is not at odds with Functionalism, but extends the concept of Function beyond its physical aspects. The architecture of pluralism is new, it takes account of the old, it looks towards the future, but is rooted in the past and its presence makes clearer man's position in space and time. The basic aim of pluralism was a new synthesis of freedom and order. Freedom means that the solution is free to shape itself as a product of inner and outer forces, but the conditioned freedom of organic growth is to become alive.

## Conclusion

This essay undertook a brief overview of several historical periods in architecture in order to highlight the existential role of architecture; an architecture that expresses human identity -a physical expression of who and where we are. Ordering the physical environment through the use of organizational elements such as an axis in Egyptian architecture, the use of repetitive elements in Greek architecture, the intersection of two axes in Roman architecture, the towers in Romanesque architecture, the geometric shapes and proportions of Renaissance architecture, the undulating wall in Baroque architecture, the eclecticism of the Enlightenment, the functionalism of the modern, and pluralism of late modern, all point to an intertwining of subject and object, mind and body, perception and concept of architecture.