English summary

Editorial
Felipe Leal
Translation by: Mariana Masera

Life cannot organize itself but with knowledge; the living creature cannot survive in its environment but with knowledge; life is not viable nor practicable but with knowledge. To be born is to know.
Edgar Morin.

A bitácora *(binnacle) is a non-magnetic case for a ship compass that is the device for finding direction. In other words, a* bitácora *not only registers the course of different kinds of vessels but also its information is useful to record daily events and decisions. In a metaphorical way, a* bitácora *can be compared to a diary where professional life experiences are entered as constructions or archaelogical and patrimonial rescues. In brief, a* bitácora *states, corroborates and certifies what has happened.*

Bitácora *(binnacle) comes out intending to be a dynamical, plural and quality journal. It is made with wide criterion and academic rigour.* **Bitácora** *aims to become the vehicle for expresion of all different areas and disciplines of our faculty at undergraduate and graduate level, including the Research Center of Architecture and Urbanism.* **Bitácora** *aspires to be a forum for discussion and analysis on architecture spheres through promoting constructive criticism so needed –but scarce– at a national scale.*

Bitácora *summons the experience of the four magazines that have been published by our faculty since last decade:* Cuadernos de Arquitectura Mesoamericana, Cuadernos de Arquitectura Virreinal, Cuadernos de Urbanismo and Cuadernos de Investigación y Docencia *that later were transformed in AM, (Aquitectura Mexicana). The editorial board of* **Bitácora** *acknowledge those who edited the four periodicals that marked an era promoting our architecture throughout the last fifteen years.*

Bitácora *is issued quarterly (every season) and displays a variety of subjects, which are discussed in depth by specialists in different sections that will change according to the content of each issue.*

Bitácora *Research section covers texts referred to Ancient, Colonial and Contemporary Mexican architecture and also displays advances of research work. The* Analysis *section includes thorough studies about meaningful works and authors, while* Testimony *comprehend interviews of important architects or groups.*

In addition, Essay *contains studies that promote discussion and pave the way to new ideas.* Patrimony *comprises all efforts to preserve our architectural inheritance.* Living Archive *rescues texts from old periodicals.* Students, *one of the main sections of* **Bitácora**, *shows scholars production by publishing relevant works, dissertation, thesis, experiences applied, dissemination or exchange projects, and national and international awards. Two more sections are included in our journal.* Letters *presents texts about architectural subjects written by poets, writers, philosophers, artists, sociologists and historians. Furthermore,* Review *embraces surveys of recent publications, exhibitions, conferences, and engaging architectural news. Finally, an* English Summary *allows* **Bitácora** *to reach new cultural and linguistic boundaries.*

Wellcome to **Bitácora** *new pages that shall be written by us all.*

Ciudad Universitaria, Mexico City, Autumn 1999.

Mesoamerican cities and artificial acropolis
Paul Gendrop and Alejandro Villalobos

When scholars deal with Ancient Mexico or more specifically with Precolumbian Mesoamerica, many of them experiment certain objection to apply the term "cities" to those great ruins of complexes abandoned by their builders and inhabitants. Many people is more comfortable with the use of the term "Ceremonial Centers". Even though these urban and architectural phenomena reveal some religious aspects and an extinct way of life, they stand out as completely different from other examples of western cultures; it seems to be difficult to deny that these issues contribute to observe them as original and very particular cases. This article is a posthumous publication of a Paul Gendrop's essay with Alejandro Villalobos as co-author, originally written in french and published in Paris by in 1988. **Bitácora** wants to approach one of the last works of Gendrop to our readers, hoping that his memory will stand far beyond.

Birth of the gigantic acropolis of the mayan era.

On the first impression, it would seem that the embryo of these cities is formed about an axis where the hill dominates. Nothing as eloquent as the ten or eleven centuries of terraces and uninterrupted reconstitutions that make of a ceremonial platform in Tikal, a gigantic artificial acropolis. If we take a look at the central part of Tikal, close to the year 800 of our time, we can notice that the tropical forest had been replaced by the massive architectonic clusters linked amongst by esplanades, squares and roads.

As long as this balance was kept, the grand open spaces would continue to attract crowds that attended to the civic acts. These were the main attraction and the reason for the existence of these mesoamerican urban concentrations. The civic and religious acts, as well as most of the group activities took place in the open air; in fact, one of the main urban features is precisely the charm of open public spaces. The urban plan, adapted to this difficult terrain, offers at first glance the appearance of anarquic irregularity, however, nothing more organic. For example, the great composition axis that were always set over important locations. This principle, particularly clear in Tikal, is nevertheless applicable to overall Mesoamerica, or, depending on the topographic and ecological conditions, the urban plan could oscillate between apparent liberty and geometric rigor.

Orientation of cities according to cardinal points.

As far back as the first Olmec concentrations, close to the year 1000 of our time, a tendency to orientate the main architectonic volumes is displayed, considering cardinal points, affirming the vocation of mesoamerican people of relating astronomy and design.

But, except for an urban plan of extreme rigor, like Teotihuacan, different degrees of a ductile plot rule. Apart, in Yaxchilan, orthogonality is practically giving its way to subtle visual relations from one building to another.

In Uxmal, where a relatively flat terrain allows certain regularity, the connections are established between the balance of the facade and a relief, or between two slits.

West from the Mayan Area, into the region of the Gulf of Mexico, Tajin displays a plan that presents a slight adaptation to the main irregularities of the ground.

Monte Alban radically modifies the summit of the mountain, and presents together with 2200 artificial terraces placed at intervals, the extraordinary balance of its square.

Urban settlements astonishing for the epoch.

Teotihuacan presents an outstanding case of urban settlement; the population calculations oscillate between 85,000 and 225,000 inhabitants, considerable figure for this epoch, and its urban plan, also unexpected amidst the context of Ancient Mexico, observes a scheme that wonders for its orthogonality.

Inset the great axis of this metropolis, two main arteries exist. Their concurrence results to the East in the Dead Road, the Ciudadela, and to the West in the Market; they probably combine the essence of the politic and commercial functions, not only of the city but also of an "empire".

Behind this ceremonial cluster, a network of streets and alleys exists, organized about an irregular plot, although traced to the right angles.

The water courses that cross the city divert to go into the cluster and, not done with establishing astounding visual relations between the main buildings, the Teotihuacans manage to make participant the main mountains that delimit the horizon, this is, the visible part of this portion of the universe.

Plots, hidraulic works, public spaces, basis of the permanence of life.

Taking as a starting point a few centuries before the Spanish conquest, the Mexica people had made of Mexico-Tenochtitlan the capital of this new empire. In less of a century this city was shaped into what Cortes met: equipped with aqueducts and linked to mainland by large roads, drawbridges, avenues, "chinampas" and plots over the lake, surrounded by a double web of streets and channels.

To better understand the spirit of Mexica urbanism, it is convenient to go back to the basis of the cosmological mind of its people.

In the Aztec mythology, the universe is divided in four orientated spaces (each one headed by a tutelary divinity of certain hierarchy) enclosed in a fifth central space where the gods meet, the human dwelling.

This principle is not only the basis of the Aztec theology, but is put into effect in a quadrangular urban square with a sacred precinct at the center, nucleus and axis of the Mexica capital, as well as the distribution of peripheral areas in four districts that coincide with each of the cardinal points.

As to the urban distribution, three essential considerations prevail; the restrictions given by the surface, given its island condition, the public works and the central space destined to the sacred precinct. These works included two main aspects: the hydraulic works and the public spaces.

The public spaces were constituted by a chain of terrestrial communications and squares, the sacred precinct was the nucleus as well as the starting point of the urban square and of the radial scheme.

Since the introduction of the Spanish city over the rubble of the capital it is difficult to reconstruct this sacred precinct, in spite of descriptions and plans transmitted by the chroniclers of the 16th century. One of the most majestic and probably the most beautiful of the architectonic mesoamerican clusters, the architecture of this Great Square manages to fuse buildings of different epoch, genre and orientation into a particular harmony. ⊗

The first monasteries of XVI century on the foot-hill of the Popocatepetl

Juan Benito Artigas

Organization of the territory.

As of August 13th ,1521, date of the seizure of the Great Tenochtitlan, the conformation of the territory that is Mexico today was carried out by means of the creation of a regional structure of citizenry that expanded itself in all directions. From the city of Mexico, taken as center and starting point, the roads that conducted to the diverse populated zones were initially traced, and to where , later on, would be susceptible of economic development.

The distribution of the native born inhabitants (naturals) was restructured by the population reductions, sites where native people from the environs were congregated. In the villages indoctrination to the catholic religion would be possible, living in civic relation with their neighbors. The evangelization of the American native people was the justification of the presence of Spain in America. The organizational consistency and the territorial permanence for over a century of the mendicant orders (Franciscan, Dominican, Augustinian) entrusted to the evangelization were decisive factors for the colonization of the New World. The naturals moved from the prehispanic religiousness (set of rites that ruled and fatally conditioned their existence) to the Christian religiousness.

Distribution of the mendicant orders.

In order to organize the evangelization of the territories, the twelve friars of the Order of Saint Francis, who founded monasteries in the cities of Mexico, Tlaxcala, Texcoco, Huejotzingo and Cuernavaca, landed in 1524. From Huejotzingo they founded the monasteries of the oriental side of the volcanoes: Calpan, Tochimilco and Huaquechula. The Sierra Nevada, name given by the conquerors to the volcanoes Popocatepetl and Ixtacihuatl, had been explored by the army of Hernán Cortés since his arrival, in 1519. Huejotzingo is located on the outskirts of the volcanoes, and next to them, Cuernavaca.

The Dominicans, who arrived in 1526, founded the monastery of Oaxtepec, in 1528. The order of preachers would launch to the south, as far as Oaxaca, Chiapas and Guatemala, therefore, the pass by way of the area of the volcanoes was necessary for them. They stayed in Tepotzilan and founded houses in Tetela del Volcan and Hueyapan.

The Augustinians arrived to New Spain in 1533, year in which they founded their first house in Ocuituco. They created the chain of monasteries of present-day state of Morelos, which they would consolidate, halfway through the sixteenth century, with the ones of Totolapan, Yecapixtla, Tlayacapan, Atlahuacan and Zacualpan de Amilpas; from here they evangelized part of present-day state of Guerrero, the Sierra Alta of Hidalgo and the ancient realm of Michoacan.

Open Air Architecture.

In the field of architecture and urbanism, the new necessities to be satisfied derived in architectonic programs different from the familiar, and this brought about new buildings and towns original as well. The custom of the native people to gather in the open air generated a particular relation between interior and exterior spaces (the outside and the inside) of the new religious architecture. In first place, the construction over the natural landscape to turn it into a sacred precinct in the open air; the monasteries of the sixteenth century served as visual guide of the urbanism, of the landscape and of life itself, aspects that revolved about them. It is thus, how the open chapels were invented, acknowledged as the American most important contribution to the occidental architectonic culture. The isolated open chapels, with their particular relation between shed presbytery and uncovered nave, anticipated themselves several centuries to the concept of spatial continuity, current in occidental architecture since the Industrial Revolution.

Simultaneously, the grand open spaces, distinctive of Mexican art, were being constructed: the atriums, frequently with four corner chapels, or posas, the wooden or stone carved crosses, the arched gateways and the processional pathways. Thus, an inedit extensive architectonic genre was consolidated. Halfway through the sixteenth century the roofed churches came to constitute in these open -air clusters, prisms of solid built architecture. The monasteries served as housing for the friars, as school for the naturals, as hospital and even as hostel for travelers. Both, enclosed church and monastery, functioned as center of population and of the landscape.

Roofed churches and monasteries.

The church in these buildings is of a sole nave, that is, a single nave that divides itself in different spaces to emphasize its distinct uses: choirloft (at the access, from which one enters the baptistry, with its baptismal font) and choir (above), nave for the parishioners and presbytery; a triumphal arch separates both spaces and indicates the starting of the presbytery, where the altar is located, focal point of the precinct's spatial composition, placed in a high area. The convent was raised at the side of the temple. The cloister, organized about a court with a two storey portico (generally) held the community services at the ground floor (usher, refectory, kitchen, profundis room and sacristy) and at the first floor the cells, the library and the toilets.

The exterior aspect of these monasteries is described by two grand adjoining prisms, the temple's higher than the convent's, the first standing out vertically and horizontally the second. Both volumes stand out from the platforms of the ample exterior open spaces. It is a matter of well balanced, static masses, that do not weigh nor hoist themselves.

Following, the enumeration of the monasteries of the sixteenth century included in the list of World Patrimony of UNESCO considered among the most prominent of the area of the volcanoes: Huejotzingo (1524), Cuernavaca (1525), Oaxtepec (1528), Ocuituco (1533), Calpan (1548), Tochimilco (1560), Tepotztlán, Tetela del Volcan, Hueyapan, Yecapixtla (1535), Tlayacapan, Totolapan (1545), Atlatlauhcan (1570). ⊗

History of mexican architecture and urbanism

Carlos Chanfon Olmos

The project History of Mexican Architecture and Urbanism (HAYUM) *of the Doctorate in Architecture Coordinating Committee of the Faculty of Architecture of UNAM, pretends to continue, extend and bring up to date basic texts that have been published about the history of architecture and*

urbanism in Mexico, in order to give a contemporary scope of our urban-architectural phenomena. Nine tomes, distributed in four volumes will account for the History of Mexican Architecture and Urbanism, from its remote mesoamerican origins, to these final years of the twentieth century.

The first volume sees to the prehispanic period, from the arrival of man to our continent to the beginning of the sixteenth century, when the collapse of the urban states takes place. The second volume, dedicated to the colonial period (from the 16th to the 18th century) analyzes the encounter of two cultural universes and the architecture and urbanism produced in the period of time when a new identity, the Mexican, matured. The third volume studies the architectonic and urbanistic production of Independent Mexico (19th century and beginning of 20th) time in which the national and modernity feelings were reaffirmed. The fourth volume is dedicated to Mexico in the twentieth century, from the Mexican Revolution to the ending of the century.

The first tome published, belonging to the second volume is titled "the encounter of two cultural universes" and offers a different scope about the European invasion of the New World. We intentionally discarded the artificiality of marking specifical dates to seek for a characteristic phenomenon of this selected historical moment; what characterized the first colonial century was all what the encounter of two cultural universes signified.

Our intention is not to write the history of architecture and urbanism over , but to continue and complete what prominent historians like Marquina, Toussaint, Angulo or Kubler devised, under a scope in accordance to our historic moment, less concerned about stylistic classifications than imbued in the quest for the human expression through its works. ⊘

J. Francisco Serrano, third generation architect

Ernesto Betancourt

The surname Serrano has been linked with the construction of buildings in Mexico for three generations. Son and grandson of architects, Francisco Serrano Cacho belongs to a dynasty of first class constructors. His education was professionaly consolidated at the atelier of Augusto H. Alvarez. After his formative years and alternated collaboration with his father, Serrano starts his independent professional life in which three different epochs are identified:

The Modernism of the 60's

The starting of his professional practice coincides with a change of attitude towards architecture in the second half of the twentieth century. Modern architecture, already consolidated, was showing some of its limitations: the abuse of certain materials not always appropiate in every latitude, the indifference towards traditional and regional resources, the impersonalization and massification of housing. In the national context, the "modernism" became the language of a state and a bourgeoisie moderately educated, enteprising and confident of the country's progress; nothing better than glass and steel architecture to represent the country about to rise in the world. Serrano, as a part of the youngest generation then, materialized his first works in this open, light and internationalist language of the mid-century architecture: buildings expanded in altitude, extensive glass windows and rational and bare structures that resulted in pure, rigorous and elegant parallelepipedons.

Concrete and public works

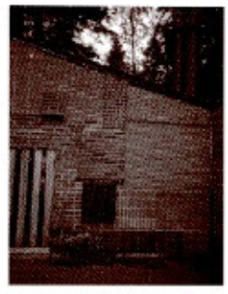
At the end of the sixties, Serrano makes contact with Teodoro Gonzalez de León, who had worked with Le Corbusier and was beginning to experiment with the propierties of 'brute' concrete, together with his partner Abraham Zabludowsky. Serrano started a fructiferous collaboration with González de León, from which works like the Garrido Canabal Park in Tabasco, the Supreme Court of Justice, or the Hewlett-Packard building in Mexico City came about. The works belonging to this stage are characterized predominantly by its public nature and by the intensive use of apparent concrete.

Simultaneously, Serrano continues with his independent work, culminated with his own house constructed almost entirely out of concrete and developed in a scheme that he would use later in other sizable buildings like the Mining Center of Pachuca, Hidalgo, about a circular court. Though we could say that the personality of Serrano loses evident presence at this stage, we could also say that the overall work wins with his prudent mastery of detail and costructibility.

The recent stage.

Constructed in the beginning of the eighties, the Iberoamerican University could be considered as the start of a different stage in the development of its author's work. In his recent works a confident turn to Serrano's natural preferences is identified, like the open and mature use of great glass windows or elegant and discreet matalic pieces, proper of the sixties and seventies works, combined with acute apparent concrete faces, frequently white, and a certain curve expressionism in the ways, stairs and elevators, reelaborating from the assimilation of his father's architecture.

It is convenient to point out two constant characteristics in his entire work: The first is that along the whole production and above the formal fluctuations of the different stages, the composition rigour and the coherence of the spatial organization of the plan, are fully attended subjects in every example and never put aside or sacrificed for stylistic winks; the correct disposition of spaces, their ambiental relations, the strict atention to the orientations and photic elements have been a daily concern of Serrano. The second would be his evident pedagogical vocation into and out of his atelier, vocation testified by many architects, now famous, that were his students when he combined professional practice with subjects taught in different universities. Vocation and teaching spirit not exclusive of his professorship, for it is evident to whom has received out of the classrooms, on the desks or in permanent conveiation, his will of trasmitting the good craft of constructing. ⊘



Alvar Aalto, master of naturalness

Carlos Mijares Bracho
Translation by: Adalisa Zárate

Celebrating the first centenary of his birth, and twenty two years after his death Alvar Aalto remains one of the most important Architects of the twentieth century.

In my opinion this is for multiple reasons: The kind of problems he proposes; the way in which he solves them; his sensibility of the place; the attention he gives to the individual needs; the respect he expresses for the community; the integration he obtains between traditional and contemporary values; the wide range of scales in his designs. In short, due to the quality and originality of his proposals, resulting in a wonderful naturalness, without any obsessions, without speculations, without protagonists.

Aalto is not only a great architect, he is too –strictly speaking– a great teacher. His works are a wonderful teaching about the fundamental problems in architecture and a notable lesson about how to solve them.

In his country, Finland, the natural spaces are constructed, defined, and generated by the forest. Forests there are the equivalent to the mountain ranges that in other landscapes define the valleys or the cliffs that organize streams. At a distance they seem like dark walls, like vertical limits, like visual obstacles with undulating outlines and blurry frontiers. Only that, when one gets closer, they stop being walls and become penetrable spaces, mysterious, and unexpected. In some ways they become an inside. The trunks, the branches, and the leaves generate internal spaces with pillars, nervures and covers; there are openings, columns, domes, cupolas, and interwoven structures. On occasions this is presented like a labyrinth, a confused space in which it is possible –and even probable– to get lost. A succession of articulations and transitions that imply protection and cover but also mystery and poetry. Roads and labyrinths. Inside and outside.

To relate to this context, to order it without it losing its spirit, and making it possible to dialogue with it, is a serious and fascinating problem that Aalto managed to see and solve.

In the Finnish landscape the ground undulates gently, its topography invites an almost tactile perception, and it gives the sensation of having been moulded with the hands, as one moulds clay.

There are also other limits, the ones marked by the shores of rivers and lakes, limits of smooth borderlines and soft curves, with crystalline and reflective planes that are seen at the distance, and that invite to be explored with a soft rhythm, gliding over the water's surface. The sinuous rivers –undulated again– are the borderlines, the traces that define the plane bay, the ground, the soil. Defined limits, soft limits, changes in material, transit from the soil-solid and opaque - to water-liquid, transparent and reflective.

The topographer studies and registers the moulding of the soil, he learns to perceive its texture, its undulations, its reliefs and depressions. To know the topography, to read it and draw it helps to understand the order of the land, a strong and attractive order that tells its story. Its sole presence (even when unattended or fading given its everyday condition) makes possible a type of perception that penetrates man as genetic information.

Alvar Aalto's father was a topographer and a forest expert. It is predictable that this antecedent should have influenced his particular sensitivity to places and explains his fine comprehension of the subtleties of the soil and landscape.

Maybe because of this, Aalto's work pays such careful attention to the problems involved with the correct and stimulating relations with the place. The recognition of the soil model and of the topographic characteristics of the place. The warm dialogue that the work establishes with the ground conditions. The terse and gradual way one passes from the found to the built. The transition between nature and what is man made.

It is not mere chance that Aalto produced some of the century's most attractive stairways, from the powerful and dominant ones that literally envelop the Baker House building in Cambridge, to the delicate and subtle ones in Villa Mairea or the barely modeled ones to enter the small square of Saynatsalo. His profound sense of the meaning of the changes of level and the management of the routes up or down are a splendid lesson, full of suggestions.

Two houses and a municipal center, can be –among his wide range of work– excellent examples of his creative attitude.

In Villa Mairea, a residence in the midst the forest, develops a simple blueprint, an L-shaped scheme. By doing this, he designs a garden that is part of the house, but also surrounds it. In this way he creates a space that will be the connection between the created work and nature.

The constructed volume that contains the principal spaces of the house is smooth, white, and with a clear orthogonal geometry. But before the front door he places a canopy, a sort of small portal with curved shapes and slanted wooden supports, like bundles of wood woven with ropes; an articulation familiar to the spirit of the free forms that the landscape offers; a transition that precedes, prepares and generates a threshold to enter or exit the house; a intermediary space that makes the relationship between inside and outside more gentle.

In the inside he makes the trees penetrate to the very heart of the composition, evoking them with the vertical railing of the stairs, showing then through the windows, the doors, the treatment of the material, and the subtle details, in such an intense way that one can say that the space is flooded with forest.

A terrace –closed on the ground floor as a portal and open on the second floor as a balcony– produces a similar transition, by the special treatment in structure, and by the rhythm established. There –one of the two main characteristics of the project– wood prevails and elegantly conduits the change from absolute white to the dark proximity of the forest. In the other, he proposes the transition with a door-way that leads gradually to the sauna. In this way he fades the absolute construction at both extremes and interweaves the forest and the house.

In his country house –also amidst a forest, on the shore of a lake –he integrates the constructed space to its contexts in a similar way. Although, on another scale and with another colour scheme, he opens a small clearing in the grove and assembles a court that is defined by the house on two sides, and by the forest and lake on the others.

The splendid set of buildings set in Saynatsalo is built over an elevated square with entranies at two of its corners; one a flight of steps made of earth and grass with an embankment of wood, and a free design that is closer to the leveling curves than to traditional steps; and the other, a stairway.

The access to the culminating space, the hall of the municipal council, is by an interior staircase that graduates light and retreats from contact with the outside until it arrives to a confined, intimate, and darkened space that invites those who will take decisions that affect the community to reflection.

The window sills in the library –with a vertical treatment in wood and a apparently unorganized rhythm– propose, and achieve, a melody that resonates like a close echo of the distant forest.

Alvar Aalto is an architect that not only concieves, proposes and resolves problems on a mayor scale, he also takes his time, cares for and sees to the smaller and medium scales; the handle of a door; the railing of a staircase; the wooden structures that open like a flower to sustain the ceiling of a small but significant space (The Council Hall in Saynatsalo) or the varied repertory of knickknacks in the walls of his country house.

He designs benches, armchairs, lamps and vases. He always questions, analyzes, studies alternatives, choosing appropriately and, frequently, adds originality. But the personality and novelty of his projects do not elude the forms and the traditional procedures, on the contrary, he accepts them literally if he judges them convenient. When he is building a sauna, for instance, he does so following the most strict designs. He does not wish to impose novelty for its own sake, it is he –and his work– who is ready to adapt so as to intergrase, within modernity, the traditional expressions.

He constantly thinks about the problem of the relation between the created spaces and the spaces where the construction will take place. He is conscious of the need to solve, in any case, in any program, in any place, the transition between outside and inside. He senses that the right choice of this will result in succeeding to make the architectonic piece belong and integrate within its place. He achieves this objective using what we could call the gradual composition. He goes from the built to the makeshift; from concrete to wood; from hard to soft; from precise to blurry; from glue to rope; from orthogonal geometry to the freely drawn; at ground level and in the elevated places: vertical and horizontal. With this structure, that usually fades off the center into the extremes, underlining and accentuating the change zones, is how Aalto solves the problem.

In most of the cases, his buildings generate an outline at the top level –as with classical architecture– which contributes to establish a border, a frontier, with the piece of sky that surrounds it to relate and –in good measure– merge with it. In a similar way he uses the stairs to structure a beginning that, at ground level, graduates a relationship between building and soil. Almost all his buildings have a beginning, a basic body and an ending. Only that, unlike traditional planning, he doesn't do this with molds, basements or flutes, but with relations, articulations and transitions in different scales between the work, the place where it is and the tints of light and space that surround it.

Another characteristic aspect of his work is the attention given to the integral solution of the problems. From the design of objects, furniture and the components of the building to the structure of the volumes, the space and movement sequences, the relationship with the landscape –natural or urban– and the close recognition of the role that the building can play in the context. His buildings in downtown Helsinki are a clear example of respect for the condition of the neighbors, never wishing to stand out individually, nor trying to alter the urban context if it escapes his possibilities. They are buildings that search for an anonymous belonging rather than a notorious presence.

His urban consciousness, the respect for the values of the community and his poetic imagination, are expressed like a gift to enrich the others, and not like a self-indulgent expression of individuality.

For these reasons, the lessons found today when we analyze the works of Alvar Aalto result particularly meaningful today.

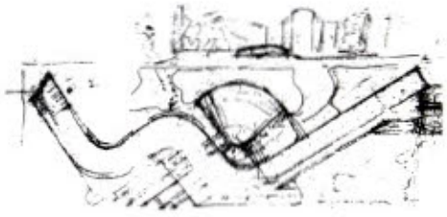
His love for daily sensations. His respect for the urban context. His readiness to communicate with nature. His way of combining materials, making them express themselves together. His extraordinary capacity to structure solutions that might seem unthinkable but never aggressive. His power to work with free shapes without making them arbitrary. His fluid relationship with traditional values and procedures.

In spite of his evident originality it is impossible to find in his work an obsession to show that he is part of an avant garde movement, the slightest concern with using only newly discovered materials, or –of course– a dependency on any of the fashions that might be popular.

Aalto does not propose his solutions as novelties but as possibilities; he works with his instruments –at all scales– to generate space and light and to achieve through that language, what is natural to Architecture: a richer and better life quality for his users.

For him, modernity does not fight tradition. I think that was due, not only to the special conditions that, since last century, were present in Finnish architecture, but also as the result of the Aalto's personal attitude, who knew how to see the teachings of history beyond forms and styles. With this, he recognized that Architecture at any time is an unending source of learning. And knowing how to read it, it is possible to detect values and problems that have been, and still are, the ones that need to be solved in all times.

That is the reason why he never had to declare a war on the past. That is the reason why he could save himself from theoretical speculation and absolute dogmas. That is the reason why Alvar Aalto is a master of naturalness.



Alvar Aalto: the dominion of the line

Miquel Adrià

Translation by: Talía Delgadillo, Miroslava Guerra y Paula García Escudero

Alvar Aalto's mastery, composed by a heterodox modernity and by a rich formal expression, is revealed in his use of materials, in the light modulation, and in the dominion of the space. His architectural legacy, that is present in almost any sort of construction –concert halls, museums, libraries, churches, government buildings, houses, and industrial and commercial buildings– makes him one of the greatest architects of this century, sharing this entitlement with Le Corbusier, Frank Lloyd Wright, Mies van der Rohe and Louis Kahn.

Alvar Aalto was born on February 3rd, 1898, in the village of Kourtane. He grew up next to his father's large topographer desk, looking at the drawing of the sinuous curves of the Finnish lakes. To quote Luis Fernando Galiano: "it is unavoidable to relate his future architecture of wavy forms to the design of the level curves in the topographical designs and to the capricious perimeter of the innumerable lakes of his native land; and the fact that aalto means wave in Finnish helps to corroborate the poetic verisimilitude of his announced fate."

In 1924, he married the architect Aino Marsio, who was his closest collaborator until her death in 1949. Influenced by Gropius and Markelius, Alvar Aalto became a member of the internationalism of the Modern Movement of the early thirties, with two masterworks of rationalism: The Paimo Anti-tubercular Sanatorium and the Viipuri Library. Later on, he gradually abandoned the functional and internationalist orthodoxy in order to progressively adopt the native materials and the curved lines that had appeared in the wavy roofs of the Viipuri Library.

The organicistic reading of the Modern Movement fructified at the end of the thirties with two masterpieces: The Villa Mairea (1938-1939), and the Finland Pavilion in the New York World Fair (1939). The mythical Villa Mairea is a country house for his friends and art patrons Maire and Harry Gullichsen. In this place, Alvar Aalto projected the sitting room and the stairs as metaphori-

cal representations of the Finnish woodlands; and their regional modulations enrich the architectural modern language with the images of popular Finnish constructions and of Japanese architecture. In the Finland Pavilion in the New York World Fair in 1939, the wavy, sloping and floating wood walls did not only surprise the audience, but also made a new breach to modern orthodoxy.

Years later he built a town hall (1948-1952) for Saynatsalo, a small industrial community. In this town hall, the plan revolves around a central courtyard, rather Florentine than Nordic, and reflects a masterly combination of materials, place and architectural language. The public character of the facades, made up by opaque planes of apparent brick in the outside and the almost domestic nature of the interior of the courtyard, as well as the three-dimensional trusses, which, like two opened hands, crown the council hall, were once again a landmark of modernity.

During the early years of the post-war period, he got a lecture as visiting professor in the MIT (Massachusetts Institute of Technology), and, later on, he built the sinuous student's home in the same campus. During this time, he had the opportunity to visit and travel with Frank Lloyd Wright.

Aino's death in 1949 was a great shock for Aalto, who became an alcoholic until his marriage to Elissa, when he began a prosperous and vigorous stage that lasted until his death in 1976. Elissa –Elsa Makiniemi– also worked in Aalto's office, and was 23 years younger than him. This relationship was happily inaugurated in 1952, with the experimental house and sauna for the two of them in Muuratsalo, where each wall becomes a display of the local masons' virtuosity as well as a collection of samples of the diverse brick layouts.

With the Museum of Art of Jutland (1958-1972, Denmark), the Wolfburg Cultural Centre (1958-1962, Germany), and the Mount Angel Abbey Library (1964-1970, United States), to mention only a few good examples, Alvar Aalto would spread his work around the world, with spaces modulated by the natural light that shines through the profound fanlights. In this way, he incorporated skylights, fanlights and light shafts of various forms and solutions to the ceilings of these buildings.

He did not search for universal solutions nor formulas, but he strove to design all the built surroundings; having no rules, but possessing a great sensitivity, he could model a flower vase as well as a city. His subtle use –and manipulation– of materials; his respect for the natural and urban surroundings, and his architectural language that enhanced free forms rather than regularity, allowed Alvar Aalto to create an original form of architecture that appealed to different levels of perception, not only to the rational one, but, above all, to the intuitive and sensorial ones.

In his drawings, the shapes are repeated in different scales, plans and sections. The vibration of the design of his sketches, edged insistently like level curves, sometimes shapes and measures the asymmetric and growing plans opened in the form of a fan, like the great tower of Bremen (1958-1962), that is repeated in a lesser scale in the project of the Villa Erica (1967), and appear in sections in the Maison Carré –a house for Mr. Louis Carré (1956-1959)–; in other cases, the amorphous and beautiful amoebas in their glasses and flower vases appear in greater scales in the soffits of the apartments of the Exposition in Berlin (1954-1957), or in the pool of Villa Mairea. In the plans for this paradigmatic house, there is also a lesson of architecture, in which drawing's greatest interest derives from his enormous descriptive capacity, without being unworthy of the figurative value that the project involves. Everything is present. Each of the materials, pavements, platforms, natural stones and furniture, is characterised; the doors are clearly different from the walls; the constructed reality is assumed and represented with extreme accuracy, differentiating the materials from their expression and up to their texture: without shadows and unsophisticated, but keeping the autonomy of the elements and the spontaneity of the line without dissolving or subordinating them to the whole.

In his 1955 conference, "Between Humanism and Materialism", the Finnish architect described the two inherent concepts of his creative philosophy: "The architect's task is to restore the correct order of the values... and to try to humanise the era of the machines. But this must be done by taking into account its formal aspect. Form is a mystery that gives/transmits the feeling/sensation of pleasure."

Aalto translated the same functional, organic and imaginative spirit of his furniture and objects to architecture, and, in doing this, he reconciled the cosmopolitan culture of the machine with the vernacular tradition.

Declaration: patrimonial value of the twentieth century architecture.

1. We, the architects of Mexico join the concern of the architects of the world to recognize and protect the significant architectural patrimony of the twentieth century.

2. We recommend the protection, recovery, rehabilitation and maintenance of the masterpieces that constitute the architectonic legacy of the ending century.

3. We propose to carry out a research that will culminate in a reasoned catalogue of Mexican architecture of the twentieth century.

4. We consider such preservation should be done in consistency to the usage and dynamics that modern society demands.

5. We summon governmental, academic, professional, social and non-governmental institutions to plan, operate and consolidate the necessary instruments to achieve this purpose.

6. We exhort society in general to sympathize with the spirit of this aim and join the efforts still to be required.

7. We propose the creation of a representative commission to embody the previous propositions and to assure their ensuement.

We recommend this Commission to be structured by:

-A member of the International Union of Architects.
-A member of the National Academy of Architecture.
-A member of the Mexican Academy of Architects.
-A member of the academic sector.
-A member of the professional sector.
-A member of the governmental sector.
-A member of social organizations, non-governmental civil associations.

Ciudad Universitaria, Mexico City, September 3rd, 1998.

The value of the twentieth century architecture

Teodoro González de León

To talk abstractly about the value of the twentieth century architecture illustrates us scarcely anything; the substance is in the expression; it is a tautology. What matters is to give the next inevitable step: to make a reasoned catalogue of the works worth protecting. The actions to be undertaken can be valued as of this catalogue. But a catalogue is not an easy chore. It implies to make a selection, and to make a commitment. To include everything is easy but irresponsible. To choose and discard is complex, risky and demands responsibility. It is a task that shall also include various points of view from critics and architects. I dare to submit not too many. A large group would tend to include everything. This requires a scientific chore that shall produce a selection that can convince and fill with enthusiasm the owners of the buildings and the authorities (INBA and INAH) that will protect them. This is the first objective.

I wish now to make two reflections raised on this matter. I feel that modern architecture, the one we aspire to practice, is not fully accepted in the society we live in. I am not referring only to Mexico; it happens throughout the whole world. Society is very different from what the pioneers of the Modern Movement imagined at the beginning of this century, which they wanted to reform at all costs. How they thought has become plural instead of uniform. It is a society with a great variety of tastes and aspirations, I would say contradictory. The society's sector that understands, looks for and likes modern architecture and art is, everywhere, minoritarian. Music is the extreme case. During the ending century we haven't listened to (but in recordings) our contemporary musicians. The concert halls' program planning, conservative and market-oriented, has dedicated no more than two per cent of its time to contemporary music. In architecture, the high and the industrial buildings are the only ones that society assimilates. Perhaps it is due to the respect rendered to the construction technique and its flauntings. Little has modern architecture penetrated regarding housing. A few months ago, at the celebration of the 50th. anniversary of the International Union of Architects, to which I was kindly invited by its chairman –here present– I commented on what I had observed during the 80 kilometers stretch from the airport to the city of Lausana, where the event was taking place: in this scenery, half rural and half urban, I saw few true Swiss chalets, many pastiches of chalets and no modern buildings, excepting two industrial plants. We could do this exercise in any part of the world. What do I mean by this? Only to be prevented. We will not count with the enthusiastic support of society and authorities for the preservation of modern architecture. You know that reactionary legislations (conscientiously guarded) exist and operate, banning the intervention of modern architecture in our historical centres and designated traditional zones, like San Angel and Coyoacan. A year ago I experienced the suspension of a construction due to the pressure enforced by a group of alienated fundamentalists entirely supported by the authorities. The city lost a dialogue –carefully planned– between two architectures within two thousand years of dis-

tance. I am referring to Cuicuilco. Such a trend of opinion has no concern, at all, for the disappearance of modern architecture.

The second commentary is more delicate and, perhaps, more somber:

Modern architecture, at its origins, was not a mere change of style, it was a profound revolution that transformed the way of constructing, or rather, it was a new poetic of construction techniques that had been being invented from halfway through the nineteenth century. Though, the development of this new poetic was very difficult for the first generation of modern architects. It was full of disputes and failures with clients and authorities. Serve as a reminder some of the letters that the Le Corbusier Foundation keeps, such as the ones addressed by the owner of that famous house in Poisy, the Ville Savoye, work that figures in every list of fundamental constructions of the twentieth century. The client reclaimed Le Corbusier that the many alterations of the project had delayed the construction duplicating the time a normal construction would have taken, and that he would also spend plenty more money than dealing with a traditional masonry construction, even though Le Corbusier had promised it would cost less. To invent a new way of constructing affects the supplying of materials, the practices of manual labor and, uttermost, it requires the invention of every detail. It was very difficult, and also led to many mistakes that soon came in sight. The Ville Savoye that we see now as a museum has been practically done over. In 1948, I worked at Le Corbusier's atelier designing and changing all the iron-work. It was ruined in only 16 years. In our profession we have observed the deterioration of buildings due to thin walls, the damage and falling of overlayers done with thin stones, the corrosion of thin metallic sections, the scarce insulation of fragile roofs and the impropriety of some types of concrete. A great part of modern architecture - which we try to protect - has been poorly constructed and has not endured the passing of time (for some reason I have been a defender of the hard skin of buildings). Everyone is acquainted with the Pompidou Centre, which reparation costs, only 20 years from its construction, exceed the original cost. Examples by the hundred exist everywhere in the world.

To finish, something to take into consideration. Some talented and famous architects of recent generations openly propose that architecture should be perishable in order to follow the rhythm of the rapid changes that happen in the present world. They propose a new ephemeral and improvised aesthetic. They are right. Never has the image of the cities changed as constantly as today. ⊘

Mexican architecture of the twentieth century: from the heroic times to the present day.

Víctor Jiménez

The orientation of the country after the Revolution demanded new cultural horizons. In 1923 Obregón Santacilia started the school of neo-colonial style "Benito Juarez". In 1925, the same Obregón approached the interior of the Bank of Mexico in the epidermal language of art déco and simultaneously undertook the project of the Secretary of Health , from an academic scheme with neo-colonial evocations and certain technical audacities, not leaving out an austere art déco ornamentation.

Nine years younger than Obregón, Juan O'Gorman works at the atelier of the former until the conclusion of the last project, in 1929. The same year he constructs the first work of contemporary architecture in Mexico. The School of Architecture of the 1920's decade, in the middle of intelectual effervescence, sponsored the discussion of the new ideas proceeding from abroad, yet remained in the theoretical field. With the project of Juan O'Gorman for the studio-houses of Diego Rivera and Frida Kalho (1931) the situation changed.

In architecture the basis that allowed Le Corbusier, the Bauhaus, De Stijl and the Constructivism to make their appearance in the twenties had been being prepared for at least a century. In Mexico, this same decade would be propitious, given our internal conditions, for a genuine historical acceleration, and such synchrony allowed that for some lustrums the international avant-garde continued to have an influence on our architects.

In about twenty years, those who transit from the O'Gorman houses to University City –and whom we now can call "heroic"– Mexico contributed to our architectonic patrimony a not at all contemptible share of master works. Let us not forget that in the same period the cultural atmosphere of the country, certain of its own value, open to the world and novelty, was the propitious context for the practice of the architect's creativity: without it such works would have never been produced. I wish to refer with the above-mentioned, yes, to the importance of preserving the major works of the contemporary Mexican architecture, toil in which important steps have been already taken, like in the main constructions of Luis Barragán or in the houses of O'Gorman for Diego and Frida.

Towards the ending of the decade of the 1960 Mexico precipitates into a crisis that alternates or adds since the politic stumbles to the economic ones, and it is not strange that thirty years later a broad sector of the Mexican society has lost confidence in the future. This notably contrasts with the prevailing spirit of our country in the decades of the 1930's to the 1950's, and has had a high cost for Mexico in the cultural field as well. The fear of the unknown has become aversion to novelty, adopting in some the deceptive vestment of devotion for history.

In order to intervene in old buildings or contexts, talented contemporary architects are required, says Jose Luis Benlliure, who considered the infurieted lovers of the past as suspicious of not having enough confidence in their own capacities as architects to face the present world.

Since I do not believe that it is possible to talk about two moments of the contemporary architecture –the first corresponding to the "heroic years", object of all our concerns, and the present, for which we will worry about in half a century–, I believe we must extend our notion of what "patrimony" signifies in order to include in this concept not only the built works, but the creativity of present architects as well, specially when it is pretended to falsely use history to restrain it. I wish to insist: it is not possible to defend the mexican architecture of this century and do justice to its true spirit ignoring today's creative minds: let us remember that O'Gorman was severly criticized for building "a fabric" in San Angel. ⊘

The patrimonial value of the twentieth century architecture.

Sara Topelson

One of the important missions of the International Union of Architects, outlined from its foundation in 1948, is the diffusion of the works of architecture and of their worth regarding matters of conception, development and construction of cities and, in general, of the spaces inhabited by mankind.

Reason for the existence of the Union is the support to the 104 national sections that integrate it, concerning the subjects, circumstances and objectives that each one states. In the last two years, the chairmanship of the Union has continuously received requests to support architects from the various national sections, whose aim is to protect and apprise architectural works of our century under the threat of destruction. This circumstance motivates today's considerations at national and international level.

I wish to point out some of the letters sent in this sense.

At the request of the Royal Institute of Architects of Australia, we sent a communication to their government recommending the protection of the surrounding areas of the Opera at Sydney; emblematic building becomed into symbol of the city. Nowadays such areas are threatened by the value of the land and the real estate investment pressure.

We have sent to the governments of Russia and Finland a recommendation to adopt jointly the restoration and conservation of the deteriorated Viipuri Library, by Alvar Aalto, also at the request of the architects of these national sections.

To the government of Ahmedabad, in India, at the request of the architects of that city, we have sent a letter alerting on the deteriorated state and lack of maintenance of the work of Louis I. Kahn, the Institute of Administration of India and the venturous situation of the Textile Union building, work of Le Corbusier, due to the pressure of real state market.

Attending the request of the Egyptian architects, we sent a recommendation for the restoration and protection of the village of Gourna, work of the laureled architect Hassan Fathy.

The UNESCO, in its purpose to apprise the architecture of the twentieth century, entrusted the DOCOMOMO the elaboration of a list stating the best works of the Modern Movement in order to declare them patrimony of the world.

With the contribution of 1,200 experts, architects, historians and restorers, 28 buildings and the complete work of four architects (Wright, Le Corbusier, Aalto and Mies Van der Rohe) were chosen.

The works that figure in the list are the following:

- Pompulha Complex, by Niemeyer in Belo Horizonte.

- Garden in Belo Horizonte, by Burle Marx in Belo Horizonte.

- Habitat 67, by Safdie, in Montreal.

- Müller House, by Adolf Loos, in Prague.

- Bat'a Company Tower, in Zlin.

- City Hall of Arhus, by Jacobsen and Moiler, in Denmark.

- The Schools of Carl Marx, by A. Lurcat, in Villejuif (Paris).

- Housing Institute, by E. May, in Frankfurt.

- Schminke House, by H. Scharoun, in Llobau.

- Einstein Tower, by Mendelsohn, in Postdam

- Weissenhof Unit, in Stuttgart.

- Fascio House, by Terragni, in Como.
- Exposition Pavilion, by Nervi, in Turin.
- Nagakin Tower, by Kurokawa, in Tokyo.
- Olympic Pavilion, by Tange, in Tokyo.
- Orphanage, by Aldo Van Eyck, in Amsterdam.
- Van Nelle Factories, by Brinkman and Van der Vlugt, in Rotterdam.
- Schröeder House, by Rietveld, in Utrecht (Netherlands).
- Narkofin Collective House, by Ginzburg, in Moscow.
- Russakov Club, by Melnikov, in Moscow.
- Doldertal Apartment Block, by A&E Roth and Breuer, in Zurich.
- The Warr Pavilion, by Mendelsohon and Chermayeff, in Bexhill.
- Highpoint I & II, by Lubetlkin and Tecton, in London.
- Lever House, by Bunshaft, in New York.
- Studio-House N. 8, by Eames, in Pacific Palisades.
- Bank of Philadelphia Foundation, by Hawe and Lescaze, in Philadelphia.
- Richard's Medical Research Building, by Kahn, in Philadelphia.

Where would we look for:
- Bauhaus, by Gropius
- 25 Rue Franklin, by Perret
- Salk Institute, Kimbell Art Museum and Indian Institute of Management, by Kahn.
- Opera of Sydney, by Utzon
- The work of Mayekawa, in Japan
- The work of Hassan Fathy, in Egypt

Or in Latin America, the work of:
- Colorindo Testa, of Argentina
- Eladio Dieste, of Uruguay
- Rogelio Salmona, of Colombia
- Carlos Raúl Villanueva, of Venezuela

And in Mexico:
- The work of Luis Barragán
- The University City
- House of Enrique del Moral
- The work of Felix Candela
- The Schools of Juan O'Gorman
- National Music Conservatory, by Mario Pani

Great omissions remain in the first list. What will survive of this century? What will survive as testimony of the changeful space of the twentieth century and of the thought and work of its architects?.

I invite the guild to join in the responsibility of producing the favorable conditions to protect the legacy of our century. I also invite every possible instance, national and local governments, international entities and non-governmental organizations.

I conclude quoting Sigfried Gideon, who in 1955 said:

"In 1920 one had to force oneself to put aside the nineteenth century trends and start again from zero. Today the circumstances are completely different, we find ourselves at the beginning of a new tradition, there is no need to destroy the attainments of the previous generation, we must expand them...." ⊘

Reconstruction of the open chapel of Teposcolula, Oaxaca.

Benjamín Ibarra Sevilla

(Architect. Obtained his professional degree in 1998 with the thesis "Open Chapel of Teposcolula; a forming experience", elaborated in collaboration with Casilda Barajas.)

The occasion in which students of the Faculty of Architecture of UNAM get involved with programs of professional vinculum is increasingly frequent. The excellent results of these pleasant experiences have been enhanced by the enthusiastic participation of the students; such is the case of the project of Santo Domingo, in the city of Oaxaca, and of the open chapel of Teposcolula, Oaxaca.

Since the beginning of these projects (in 1994 an 1995 respectively), the INAH made an agreement with the Max Cetto workshop interceding architect Felipe Leal (then coordinator) and architect Enrique Lastra, member of the teaching body of this workshop who at the same time supervises both sites. The opportunity generated by this agreement allowed Casilda Barajas, René Caro, Omar Fernández, Arabela González, Eduardo Guerra, Gerardo López, Manuel de Jesús Sánchez, Jaime Schmidt and myself to represent our Faculty and be part of the team integrated for the restoration of the best achieved open chapel vault of our continent.

The National Institute of Anthropology and History (INAH), has been in charge of the project and execution of this work, through architect Juan Urquiaga, financed by the government of the State of Oaxaca, Fomento Social BANAMEX and Consejo Nacional para la Cultura y las Artes (CONACULTA).

Brief background of the open chapel

Some authors consider open chapels could have had precedents in some examples of hispanic-muslim architecture built before the discovery of the New World; nevertheless, this has not been suitably proved. On the other hand, researchers on this matter agree that the use of these buildings and their relation with the atrium have no precedent, and are America's contribution to the repertory of forms of architecture in the world.

The priests of the mendicant orders that came to Mexico in the sixteenth century faced their mission using the atrium-open chapel system to evangelize the numerous indigenous population. The relation obtained between open and semi-open areas was generous and tolerant, respectful towards the prehispanic ritual. The novelty of the program originated a variety of models that followed an experimental path, leading to the fresh and unique exemplars of religious architecture of colonial Mexico.

In the professional thesis elaborated with Casilda Barajas we presented an architectural analysis of the open chapel of Teposcolula and its magnificent vault. The geometric relations that rule the composition have close correspondance with the hexagon, and to the symbolic attributions commonly given to geometry and built form. This way of analysis is similar to that employed by G. Lesser for the Pantheon in Rome, or the suntuous gothic cathedrals of Reims an Amiens. Without intending to compare, we confirm the great value of our building: the set of virtues we can assign to it, in as much as of its conception and completion, which are determined by the circumstances of its time. The manner it trascends surpasses fashion, superficiality and mere inventiveness.

A parenthesis in history

Fortunately, construction systems used in the sixteenth century compelled constructors to think simultaneously in the composition and in the construction. The substructure of the building gives shape to the space, and the ambition of these men give scale to it.

Immersed in such dynamics of thought and considering this as a permanent construction, we have thus approached our subject in Teposcolula. We think there is no other way of doing it, for we have to reconstruct the vault in the same manner it was done in the sixteenth century.

There are some characteristics that make this a very particular experience. Let us start with the cabinet work: here the pieces that conform the tracery have to be solved; to do so we have to observe them from different projections using some geometric recourses; the solution regarding its component parts and its shape have to be congruent with the structural forces of the half sphere in which the vault is inscribed. Each piece has to be placed precisely, in accordance with the geometry that rules the trace of the nervure. The synthesis of our design parameters guarantees the perfection of the assembly of the stones in order to achieve the space those men conceived.

In order to make tangible what we see in a drawing we have to obtain the raw materials, which unlike contemporary works it is not concrete or steel, but stone. Character is radically transformed for it is not as easy as asking for a container with concrete of certain resistance specifications. In this case, a group of people had to go into the hills to extract the material, served with hammers, mullets and wedges, to cut the stones that we would put together again for the vault.

When the big stones arrive to the atrium, their position for the vault is assigned according to its size; assigning as well the carver according to his skill. Depending on the intricacy of the work, the price of the piece is set. Every person earns for what they know, and gets the job they deserve. At the carving workshop we found surprising similitudes with the medieval loggias; the organization and practices of the guild of stonecarvers have changed little to this day. Among the sound of hammering and jeers the shape of the stone is given, while we try to explain and examine each so that the shape is correct.

The advantage attained by the freedom of solving our pieces confers as well the responsibility of making them right. Our preoccupation of each stone occupying the place our project indicates requires of the precision of a skillful masonry team. Once the stones are mounted on the vault the work of all those that intervened converge. Team work –which is different from the idea of a sole creative genius– is one of the main lessons we owe to this project. Undoubtedly, in this mission we are repeating a process that necessarily took place four hundred years ago; the similarities we find in the organization of the construction industry originated in the European middle ages, which somehow repeats itself in the colonial times are worth considering. Jean Gimpel and Carlos Chanfón, among other researchers on this matter, reveal facts that illustrate impressive coincidences, stated in greater detail in our thesis study.

This priceless experience has enriched our craft substantially. To express everything lived up to this point and to acknowledge all who were involved would be a long story. We are certainly fortunate, for we have participated, at the beginning of the twenty first century, of an important parenthesis in our history and of the history of architecture of our country. ⊘