## reviewed paper

# Evolutionary Processes, Morphology and Typology of Historical Architecture as a Line of Research: a Tool for Conservation

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#### 1 ABSTRACT

From some years to the date, a great concern for the rehabilitation of historical centres has been registered; there is a change of attitude since historical centres have been conceived as purely cultural entities, now they are considered as entities with a great economic profitability.

The subject of Historical Centres acquires daily a major importance in the discussion and approach of new urban politics in Latin America. This is due to their existing contradiction, preservation and development.

Cultural heritage is an inherent part of historical centres; as we all know, it is integrated by everything that a social group has created along time and identifies us in relation to the rest of the peoples. Heritage is a creative dynamic and multidimensional process, through which, a society merges, protects, enriches and projects its culture. Cultural heritage incorporates science, technology, art, tradition, monuments, customs and social practices of various kinds. Its knowledge is essential to protect and preserve it in an integral and total manner and with this, make possible that the society characterized by its culture continues existing.

Although it may seen obvious to emphasize the importance of research in any practice of design, application and evaluation for the preservation of the material heritage, we have to remember that we cannot intervene in a determinate field if we do not have a knowledge more or less precise and complex of its characteristics, lacks or strength, so that in this manner we can decide correctly and reasonably of how to take corrective actions, implement restoration and conservation measures and where the tendencies, services or practices previously existent must be reinforced.

To establish lines of research that allow the generation of real knowledge to intervene in our historical centres, and mainly in their architecture of historical nature becomes fundamental to point in a positive way the intervention in these places. The research lines are assumed as generic orientations of common order which may include particular projects, which allow the production of knowledge about and over circumstances, aspects and factors that characterize a phenomenon.

The production and contribution of knowledge about space, formal, functional and constructive aspects of the historical architecture heritage is the fundamental base over which the preservation of the historical centres should be consolidated; in this manner the understanding of the systems, materials, constructive procedures, space morphology among other aspects may allow us to determine formal and functional typologies that conform the heritage architecture in time and apace and with this support systematically the interventions of structural or formal type in the historical buildings.

In this sense and in the Line of Research "Architectural Typology and Morphology" the project "Evolutionary Processes, Morphology and Typology of the Historical Architecture of the City and Port of San Francisco de Campeche" is carried out; it pretends to go deeper in the knowledge of the historical architecture of the XVI, to XIX centuries of the city of Campeche and determine the functional and formal typology of this heritage immovables with the purpose of supporting the conservation works, restoration, urban architectural intervention and regulation needed for an integral revitalization of the city's urban historical buildings. In this respect, the present project besides characterizing the architectural heritage of the city of Campeche, pretends to contribute with specific knowledge as the determination of functional and formal typology by architectural type and by historical period of the historical architecture of the city of Campeche, establish the constructive typologies that conformed this architecture and propose the degrees of

protection for the heritage immovables such as the regulation of conservation and special restoration for each one of them, information with which the instances that intervene and influence directly in the Historical Centres may reach consistent and integral decisions in the intervention, conservation planning and processes of the heritage immovables of the city.

#### INTRODUCTION

Why is the knowledge of architectural typologies useful? Is it useful? What could the formal, functional, stylistic and historical analysis of a model that has been modified and has developed greatly through history contribute? What advantages are obtained with the establishment of the study of the architectural typologies as a line of research related to the architectural heritage?

To whom or what would it serve to deepen in the knowledge of some Franciscan monastery, a built-up home during the colonial period or the bastion system of some port city in the Caribbean that would go beyond a technical description of the architectural space?

The answers may seem obvious, but undeniably they are not; if we compare the recent architectural practice abundantly influenced by postmodernism, with the previous loaded with a great historical sense. Likewise as we become aware of the crisis in architectural composition in the manner of making and understanding the originating building; this situation in the traditional separation between building and architecture with a constant permanent distinction in which the traditional value hierarchy proper of these terms, should be reversed; regarding architecture with a capital A, is worthy of attention, critical assessment, study and not the building. We must not forget that building should be understood as the general context of the built-up, which is for certain, the main star of the anthropic environment and of its cultural history.

In the same manner it is not if we start from the premise that the notion of typology is abundant in assertions. Denominated in different manners, we could think about her as a usual practice in a period of history, or only as a subsequent evaluation of the construction that results more critical than practical, an architectural analysis more than a design process.

Every day we read and listen that we coexist in an apathetic historical age of unthinking syncretism, of repeated yearnings of a little comprehensive past, without a critical reference interceding in them. In this manner, to count with a study and analysis of architectural types comes to be a theoretical and methodological tool for understanding historical processes, daily experiences and creative sensibilities.

The need of knowledge of architectural typologies is obvious. Waisman mentions the existing situation in many cities, the problems of its non harmonic development and the chaos of the urban landscape is what has called the attention about the relation architectural type / urban model; this situation has motivated that in some cases type has been used as an essential instrument for the restoration of urban fabric for the reconstruction of historical areas.<sup>2</sup> We have cases as the historical centre of Bologna where the conservation and restoration process was based in typological analysis where exterior morphological typology intervenes, as does the internal structure.

To conceive a clear view, allows us to be situated decisively in much more adequate conditions and with better elements to obtain conservation, protection, rehabilitation, use and enjoyment of architectural heritage; likewise, on the other hand, the conception and design of architecture more similar with the identity of the society in which it is immerse, related to its traditions not implicating less modernity and mostly adapted to its reality and needs. In this manner as Ramón Gutierrez<sup>3</sup> mentions: "The problem did not lie or lies, on criticism of the texts, as it has been pointed out, they cover an essential stage of our historiography, but increasing the study field incorporating the architecture in the urban and rural experience understanding it from its relation with the social historical context that makes these possible. The step of the research from the isolated building work to the sets and typologies, from the traditional subject to the marginal architectures, from the central areas to the outlying areas, from the worn out periods to the less studied, means the opening to a new reading of our history of architecture that we must transit starting from all that has been done".



<sup>&</sup>lt;sup>1</sup> Caniggia, G. et.al. "Tipología de la Edificación. Estructura del Espacio Antrópico". Madrid. 1995. p.4

<sup>&</sup>lt;sup>2</sup> Waisman, M." La Estructura Histórica del Entorno". Bueno Aires, Argentina. 1985 p. 12

Gutiérrez, R. "Arquitectura Latinoamericana, Textos para la Reflexión y la Polémica". Lima, Perú. 1997, p. 87

We can not deny that to be able to visualize, imagine and carry out architectural works, more consistent with its people and with its natural environment, will be reflected immediately and positively in the cities, in the rural environment and in general in the habitat and way of life that accommodates them.

#### 3 THEORETICAL PREFIGURATION

Starting from contemporary scientific parameters, is that architecture has been able to base its investigation advances. Supporting them many times in social sciences' tools, is how new tools and more appropriate and specific techniques for architectural tasks have been built. However, there are many who do not recognize even in architectural research, its systematisation and scientific character; and that is why inside this theoretical prefiguration we must set first the necessary scientific bases to validate the processes and methods used in any research work.

Among the new aspects that have to be pointed, we can refer to what Kerlinger tells us about scientific research: "it is a systematic research, controlled, empirical and critical, of hypothetical propositions about supposed relations existing between natural phenomena". Under this premise the architectural phenomenon (particularly speaking of colonial architecture) has been observed in a systematic and critical manner through a controlled process (inside the heritage zone of the city of Campeche, referring to the seek of an architectural typology and methodology and through pre established systems or procedures).

Some current constants perceived in heritage areas as the disdain and affectation of constructed heritage of colonial origin, as the disrespect and integration of new architecture opposite to historical context (specially with colonial regarding) or the lack of identity of the local population, have risen both from the observation of a new phenomenon (interaction of contemporary architecture with colonial contexts and at the same time the colonial regardings in the structure of contemporary architecture and the city) as an understanding lapse (represented by the lack of architectural research in our circle and above all, the systematic and critical study of the historical continuity relation in the local architectural production).

Now, Kerlinger establishes that for a problem to be object of scientific study, it must satisfy at least, the following three conditions<sup>5</sup> a) it must express a relation between two or more variables; b) the approach must be clear without ambiguities; and c) it must allow empirical verification".

On the other side, the clear relation that is pretended to establish between contemporary modernity and colonial history does not allow ambiguities, although the relation is bilateral the meaning is univocal mainly chronologically.

Therefore the empiric verification results not only factual, but also necessary in terms of proving that the colonial influence survives strongly even in our architecture and therefore must be restudied, recognized and reconsidered as a source of creativity and rescue, respect and conservation of our heritage.

Counting with a more human, environmental, urban and architectural lecture of our contemporary reality, brings us near a qualitative analysis that separates us from positivism and that makes us give priority to the particular, own and local where "...the preservation of urban architectural heritage has an essential role in the realization of the historical memory and the dynamic consolidation of identity. At the same time, the recovery action and formulation of the contemporary architect gives credit to the possibility of constructing the new identity without falling in formalistic nostalgia or vanguard merges...".<sup>6</sup>

About the research method, we can talk of a qualitative humanistic intention that has been clearly manifested in the integral analysis of the phenomena. Definitely the intention is not to establish general laws, on the contrary, only to make a review of our case to transform our environment in some more beneficial manner.

One of the central concepts of the study, we refer to continuity, has been defined as the essential characteristic of all human works that, being that quality of constant transformation, adaptation, actualisation and reform, stays tied to time, to a present that turns the future into past and to an eternal go by.

In common words, the theoretical construction of the continuity has served us to modify the traditional and static conception of the history of architecture, which understood the buildings as finished and irremovable objects. In exchange, this new movable perspective of continuous transformation will allow us to understand

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<sup>&</sup>lt;sup>4</sup> Bisquerra, R. Métodos de investigación educativa, guía práctica. 1989, p. 1

<sup>&</sup>lt;sup>5</sup> Ibid, P. 20-21

<sup>&</sup>lt;sup>6</sup> Gutiérrez, R. Op. Cit. 113-114

our environment in a better way and in this manner identifying with it; we can know, accept, respect, take advantage and enjoy it fairly and completely.

In this prevailing continuity the central and fundamental role is the conformation of the types, starting with the premise that typology is an instrument that allows carrying on a reduction of the diversity and complexity of the real phenomena, to incorporate them into a coherent manner to a general system. Therefore, this system will not include all the existent diversities of unique cases, on the contrary, only those built-up objects considered objectively probable and empirically relevant will be looked for to be represented.

The reflection about the ideological significance of typology as an instrument for thinking and design turned out fundamental "with no doubt there is a close link between the instruments of analysis and those of design, so, a characterization of an instrument for one of the fields is valid for the other" (Waisman, 1985:5) for each case, each instrument should adapt to the tasks and objectives requiring a critical historical analysis, more detailed instruments than a generic urban analysis.

In order to have it always present, our objective, is a strict and intrinsic reading oriented to the design and realization of built-up objects. Likewise, in this frame it is worth mentioning the fact that these objects that surround us have their own individuality, their own arrangement, so much that we can recognize them and designate them with a different term for each kind of similar objects: they have a relative capacity of antagonism with other objects, that guarantees us the identification of each one before the others. Also, no object is formed by itself, but in some way is made by parts, also these parts really identifiable among them according to their relative grade of self-sufficiency and complementary with the rest of the parts.

Types are designed with a specific purpose linking abstract elements to build a representative concept of reality in which it is possible if the needs of the research or the design requires it, "intensify" some of its qualities to increase its operative capacities. In this manner typology allows to identify and simplify the characteristics considered more relevant of the phenomena, helping the drawing of preliminary maps of the specific subjects of knowledge.

All this points towards a better understanding of urban and local architectural reality and, consequently towards a new way of intervention in the own artificial contexts, as much as in historical as in the contemporary.

# 4 ANALYSIS AND COMPONENTS

The register of World Heritage is being structured with a series, longer each time, of sites and objects, the same natural or urban and architectural. This whole of goods forms a wide heritage of the best achievements in human evolution in relation with the environment, in different geographies and historical moments. The list registers that which is understood as a common and universal good must be preserved in order to secure matter and memory of such development.

In this context, the city of Campeche is a settlement that represents not only an encounter between humanity and nature but also the path that man has taken to transform nature into a resource that modified originates culture. 5 centuries of history, encounters and happenings.

In spite of the great number of colonial houses that still exist in the city of Campeche, it is difficult to know their original architectural characteristics and use, this because of the difficulties mainly derivative of transformations that these immovable items have been suffering along time. To this we must add the fact that housing as such, was a hardly documented genre and practically not studied by specialists.

Historical documents about housing that are possible to locate in archives, are mainly legal documents whose content is principally based on some architectural and structural description of the house but practically with no data or drawings; likewise there is no further information about the use of its premises, scale, orientation or descriptions about its technical or constructive particularities.

With the passage of time, technological advances have caused that the number of factors that constitute these and other buildings have grown radically. Each day, the elements to be considered have grown, and the diversity of its relationships makes it difficult to manage. In the study previously mentioned, in order to be able to analyse this vast whole of characteristics and properties of a diverse range of possibilities of

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<sup>&</sup>lt;sup>7</sup> Waisman, M. Op. Cit. 5

immovables, approximately 1700, of the XVI to XIX centuries, required necessarily a reduction, identifying and emphasizing definite groups of those most significant characteristics.

Even though the detection of all the range of notions that define the constructed media and its environment may have resulted important, we need a more contributively evaluation and hierarchization of information that was judged relevant even in an arbitrary and temporary manner. For this reason the valuation of five aspects, the most influential for the typological definition were proposed. Among the attributes considered crucial, it is possible to talk about the functional, formal constructive, semiotic and location components.

In this work we will only approach one part of housing, analysing three subcomponents which are part of the functional, formal and location components analysing as follows: 1.- The implantation: determined by the relation between the housing and the site, its position regarding its front and with the street. These qualities make possible the existence of various housing and city models. 2.- Special organisation: Consists in the existence of the various necessary premises for domestic life, its location in different parts of the housing, its structure and grouping constituting differentiated areas. 3.-Morphology: this is the architectural form as support, and also its complements, as the relation between openings and solids, the expression of materials such as texture and own colour and the functional applied ornamentation.

In these subcomponents we can enunciate as an element of validation the concept of urban location being one of the elements that allows us to know about some of the outstanding characteristics of architecture. The combination of favourable habitability conditions in a house with a good location resulted a favourable and determinant condition for our study of the typological conformation of housing, and so in this manner we could observe that the most part of the immovables near the main square coincide in the functional and formal composition, being housing situated in wider sites, with a more formal quality and generous spaces for each one of the spaces that conformed them.

Another subcomponent as implantation gave us various elements of analysis, among them the position in the site was validated, determining in a general manner for the cases in which the dimensions of the site were wide, the construction occupies the edges of the site and the main yards have a central position, being able to have one or two of them; the backyard is at the last part of the site and in many cases was a multifunctional area; in small sites, the existence of open spaces made the constructors of these immovables not to construct on the borders, this situation occurred mainly in the sites distant form the main square of the city.

This same subcomponent is conformed of other elements for its analysis such as the relation between the contact surface and open areas; to a great extent the houses of the time on study had a density more or less high covering occasionally 80% of the area of the site, although in cases of reduced sites the yard occupies only 11.5% of it. Also in this subcomponent the location and proportion of open spaces was considered, finding houses with one or two central yards depending of the surface of the site, in which the architectural part was developed and a back yard always at the end of the site taking up all its width. Meanwhile one of the most recurrent cases was the lateral yard, one or two over the same axis and a back-yard same as the preceding. The proportion of the yards was an element of analysis and turned out to be very variable.

The building-street relation is another element for the analysis of the subcomponent of the implantation, since the buildings motive of the study had a predominant housing use, but not exclusive, in them took place commercial and productive functions, reason why the existence of annexes is frequent. Predominantly housing in corners present annexes on both streets even though the farther they are from the most important area of the city this scheme changes and they are localized only on one street. Of the immovables localized in the interior of the streets, only those near the main square present this type of rooms and are a constant in the two- story immovable. Most of these annexes were independent of the rest of the site only in two cases these rooms were found linked to the interior.

The space organization was another subcomponent to analyse; this consists basically in the type, number and grouping of the various premises destined for domestic life. The criteria used for this analysis started with the consideration of the existence of groups of precincts for social, family, intimate and service activities from which one could place the characteristics of the houses in the time we study, they were so grouped in premises of social use (living room, dining room and anteroom), premises of family use (bedrooms and some living rooms), premises for intimate use (bedrooms, bathrooms and dressing rooms) and finally the premises for service (stables, garages, cellars and bedrooms for servants).

In the first of the groups we found various proposals in the immovables in the surrounding area of the central square; some more complete houses have a living room specially destined to receive visitors; in other cases as those which contain central yards count with small living rooms above the yard corridors. In houses of medium level and for the second group we find a cabinet related to the exterior in a manner of office, appearing in houses of medium level; dinning rooms are spaces in houses of a certain level and they are immediate to the kitchen while dissociated from the living rooms.

While in the premises for intimate uses, the bedrooms, for housing of medium level, result numerically more important; these rooms as a constant for almost all the evaluated cases are established in an axis and in a successive and intercommunicated manner. In the case of the service premises it was determined that these are in function with the complexity of the house; they can become inexistent in modest houses. In bigger houses their existence is greater, finding inside the housing the existence of premises as kitchens and pantries; outside, most of them related with horses and carriages besides the rooms for the stable or the stable boy.

In relation with the space structure, more reduced houses have a simple space organization were there are few specialized areas distinguishing in the best of the cases the dormitories even though it is possible to identify the living room because of the accesses to the house. In the houses with grater number of premises certain organizational orders are presented, since the access to the house is directly by the front door which leads directly into a yard which may be central or lateral and directly connected in some cases with the cabinet; the yards allow the subsequent distribution of the rest of the housing getting to the kitchen that is commonly found at the end of the construction and connected directly to the backyard. In smaller houses you accede directly to the living room that is where the subsequent rooms are distributed.

In two-story housing the stairway usually has a predominant place in the space structure of the immovable and the rooms are located on the second level, leaving for the ground floor the premises of social use and services. The premises of the upper floor show a structure by zones in which an intimate area is defined with an independent access from the corridor, even though the bedrooms that compose it are intercommunicated.

The constitutive elements of the architectural form can be analysed in two levels: as support an as complement of the form, this is what determines the subcomponent denominated space characteristics. In the first case it observes the constructed form according to its basic characteristics, which can be volumetric or planimetric. However the complements of the form are referred to the qualities of the openings of the building; dimensions, proportion and rhythm, also textures, colour and ornamentation are observed.

Within the form as support we can mention that a common characteristic of all the civil urban buildings of the city of Campeche, belonging to the viceroyalty period, is to line up on the front of the site and take up the whole of it, giving to the block where they are located a certain condition of quadrangular block and to the facades, a continuous wall, predominating horizontality. The horizontality and the proportion many times elongated in corners, this same horizontality speaking of the block, but when it is about medium sites there are many cases in which the front of the site is narrow shaping in the block of facades a vertical breaking that makes the urban landscape less monotonous.

In the analysis of the complements of the form we can mention, speaking of the characteristic horizontality of these buildings that is emphasized thanks to the presence of certain functional and ornamental elements such as cornices. In the case of smaller immovables, cornices help to reduce the relative verticality, while in corner sites or large housing, pilasters manage to revert that marked horizontality. It is worth mentioning that in the case that occupies us, the city of Campeche, historical immovables are formed by only one or two stories that emphasize this situation.

These immovables show great sobriety with the combination of limestone in lintels and jambs, with lime and sand smoothing; ornamentation is scarce but the colouring is rich and diverse.

## 5 CONCLUSION REMARKS

The study of the evolution of morphological and typological processes of architectural heritage in the city of Campeche turned out to be the last purpose that allows us to understand through the determination of regardings, constants and determinants of the character of our contemporary architecture. Likewise, the systematic study, identification, description and analysis of the environment and the buildings of colonial origin conformed the essential and adequate tool to know the experimental reference framework that local

community (social and professional) owns, and with which it carries out as much as interventions in contexts and colonial buildings (or historical-heritage), as the conception, design and execution of contemporary building work.<sup>8</sup>

We are trying to build through this proposal, our historical a priori, this is, to conform the material from which as today we will work, with this we must refer to institutions that will provide us with differentiation systems that will allow us to enumerate the objects existing in the unity. As we know, new objects in the matter appear continuously, that is why we try to make a first distinction between already elaborated objects by architectural knowledge, and objects not yet elaborated that will be necessary to incorporate.

In the case of architectural knowledge, the basic system for differentiation traditionally existing has been the architectural value of the building works "complex value in which the aesthetic component occupies a predominant place, linked, it is true, to functional or technological values". It is in the works that have gained such magnitude or value where the objects of architectural reflection have been discovered. The heritage zone of the city of Campeche keeps totally that great value, its magnificence lies not in the unique object but in the whole of the objects that makes it unique and unrepeatable, it is there where we take its value as a point of reference for the analysis and conceptualisation.

In this zone and in the whole of historical-heritage immovables those that we define as a structure to start with. Regarding the quantity and quality of the information that we have about these immovables, we only considered in this order specific aspects of the architectural structure that could be susceptible of an homogeneous categorization and that formal typologies, functional, structural, of relation with the environment, etc. could be part of their own nature; and we leave aside as now, those that could shape themselves as relations and communications between those objects or as well, between them and the exterior universe to the unity considered as theories, design processes, social requirements and production processes.

Knowing that until today it has not been possible to solve and settle the questioning of radicalism in modern and post modern architecture, the present work and the study here approached joins the world's interest in the study, application and diffusion of this subject in the architectural practice. And we start from there in order to generate a line of research that makes possible the use of typology as an instrument for the design, projectation and execution of architectural works, trying to fill an important gap in the range of the application of typology as support for reading, analysis and the resulting protection and rehabilitation of historical cities or urban zones of heritage value.

Architecture and urbanism have been tools of modernity, the construction of the novel and the industrious seek of progress at the cost of the destruction of the past. Architecture shows with its practice yearnings of modernity. The dilemma has been that this destruction, in which instrumental rationality has been implicated, has forgotten the human memory and experience that was also creative and utopian in its moment.

The answer to this overwhelming step of instrumental modernity has been in many cases the returning to the past. The seek of a memory and an old experience that for the simple fact that it happened, we believe it was better; but who thinks like this does not consider that turning back without the premonition of an utopia, of a promising future, turns us conservative and traditionalist if not perhaps reactionary and fundamentalist.

The study of types, of course, does not solve this contradiction, that could be improved with the close combination of historical conscience and the project for the future. But if the typology studies do not solve it, in exchange they assist us to situate ourselves in a reality historically built and motivated by this renewal project.

The importance of architectural typology to give continuity is in its possibilities, in the functional analysis to understand the form, and the formal analysis to comprehend the styles and the aesthetic trends, or in its critical evaluation that locates it in its cultural and historical context. There is its significance, furthermore, not only in defining and describing a type in particular, but also in situating them as ideal models to compare architectures, creativities, forms and functions, procedures and materials, elements and ornaments, utopias and nostalgia. They are useful, in short, to approach the post modern historical practice and, at the same time, to locate it in post modernity as typology.

<sup>&</sup>lt;sup>8</sup> Urzais, E. "Mérida: una identidad virreinal contemporánea". Mérida, México, 2000. p 242

<sup>&</sup>lt;sup>9</sup> Waissman, Op. Cit. 58

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