He Who Listens to Matter: Approaching the Paraguayan Craftsman as a Contemporary Builder

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This article focuses on the formation of a cultural portrait of the Paraguayan craftsman, a key component in the development of the architectural style of this small Latin American country. In a totally precarious social, political and economic context, the abundant material culture of Paraguay has led to the emergence of the figure of the artisan who can manipulate abundant, locally available materials and transform it into architecture. This process is developed in collaboration with the architect through an exchange of technical experiences based on trial and error, resulting in a unique way of making architecture.

PARAGUAY AS A CONTEXT

We will approach Paraguay as a case study, scrutinizing the way it approaches the creative process as part of an architectural project method where the artisanal dimension has primordial value. Contemporary Paraguayan architecture relies on the skill and intelligence embedded within the hands of its masons, stonemasons, potters and carpenters. These anonymous craftsmen have contributed to the renewal of Paraguay’s architecture, which has been recognized with awards from the Swiss Architectural Award 2008 (Sweden), the Golden Lion at the 15th International Architecture Exhibition of the Venice Biennale 2016 (Italy) and the Moira Gemmill Prize for Emerging Architecture at the Women in Architecture Awards (UK) by Gabinete de Arquitectura. Paraguayan works have also been awarded prizes by the Ibero-American Biennial of Architecture and Urbanism (BIAU) and the Pan-American Biennial of Quito (BAQ), as well as active participation in the Latin-American Biennial of Architecture (BAL). The hands of Paraguay’s artisans, its scarcity of resources, and its generous material culture have created an architectural narrative which has garnered the attention of international critics. Part of the value of this architecture is based on the organic nudity of its built surfaces and the raw expression of its works (fig. 02), terms that communicate an honest architecture’ in Ruskin’s words, free of gadgets intended to feign other materials rather than celebrate those with which they are actually formed, and which the author defines as an architectural lie within his lamp of truth.

Contemporary Paraguayan architecture is articulated through innovative construction methods, where the risk of experimentation assumed by the architect and the technical contribution of the craftsman create a unique fusion not seen in other areas of the world. The Paraguayan territory provides a wide variety of materials which are

THREE STATES OF ARCHITECTURE IN ONE SPACE

In 1932, the Museum of Modern Art in New York (USA), led by Phillip Johnson and Henry Russell Hitchcock, opened its doors to the public to stage the ‘Modern Architecture: International Exhibition.’

Models, plans and photographs guided the experience of touring the exhibition, which in those years grouped together a series of architectural practices that had in common the form of a project, devoid of regional characteristics, and that confirmed the international development of this style.

Thirty-two years later, the exhibition ‘Arquitectura sin Arquitectos’ (Architecture without Architects), curated by Bernard Rudofsky, was mounted in the same space. Between November 9, 1964 and February 7, 1965, the exhibition introduced visitors to architecture with a regionalist nature, based on anonymous construction projects from different areas around the world. Rudofsky’s exhibition focused on recognizing primitive architectural expression conceived from the everyday life of its inhabitants. This architecture is embedded in different contexts, and its formal expression meets the immediate needs of the population while simultaneously adapting to local climate, topography and materiality concerns; or in other words, constituting an architecture made with local hands and common sense.

Moving forward to the twenty-first century, in 2010, the exhibition ‘Small Scale, Big Change: New Architectures of Social Engagement’ presented eleven projects and works located on the five continents at the Museum of Modern Art in New York (USA). The exhibition was curated by Andres Lepik and was made up of architectures that promoted a new way of living in the built environment of peripheral and neglected communities. The design and construction process exhibitions were developed through collaborative work between the architects and the communities. Both the architect and the inhabitants of the community are recognized as co-creators of social, economic and political transformation, as shaped by small-scale works.

It’s interesting to study these three exhibitions since they display and contrast three unique states of architecture exhibited within the same space, but shown with more than thirty years between them. The first state is characterized by the universality of functional architecture that seeks a common architectural language, determined by the uniformity of smooth, polished, unadorned surfaces, where architecture does not assume information that the immediate context can provide. The second state is characterized by geographical, landscape and material particularities that are recognizable in a given cultural context and that influence the architectural object, or in other words, tailor-made architecture. Finally, there is a third state of architecture, where the architect is recognized as a social and constructive articulator, who mediates implementation by using the craftsmanship present in the hands of its inhabitants and anonymous builders.

Considering the latter, this essay invites us to study architectural practices that develop in areas which are poor economically, but rich in local material culture. This viewpoint articulates a project logic based on access to material culture and the artisanal value of human capital. An architecture of place. A small-scale architecture with a lot of control over what is built; where architects develop an architecture of global interest based on the values of each of the cultural contexts where each project is located. An architecture based on working with the hands. A healthy art in the hands of the craftsman.
rich in their ability to provide plastic expression, but remain resistant to mass production. Thus, the geographical context of Paraguay has influenced the formation of construction methods based on a process of testing, accumulating and hoarding materials, with the hut being one of the first constructions that allowed its indigenous inhabitants to take refuge from the inclemencies of climate in that territory (fig. 03). Later, with the arrival of the Jesuit missions, Paraguay began to incorporate trade skills imported from Spain, a process characterized by the mass and weight of its architectural components. The stereotony of the base is incorporated into this culture (fig. 04). The native, who was already a skilled weaver and potter, approached these new techniques and constructive elements which were previously alien to their territory and landscape. We can see the emergence of a culture geared towards doing with one's own hands. The sum of techniques and materials continued to develop as Paraguay's culture took shape as an established nation.

Within Paraguay, the colonizers found ways to develop their skills using new materials and construction systems. This relationship between apprentice/official/master coincides with the idea of craftsmanship as put forward by Sennett, whose aim is to establish intellectual learning based on trained practice over time and constant repetition. We can also highlight the great capacity of Paraguayan craftsmen to adapt to the economic, technological and material conditions of the time.

Considering this last precedent, recognizing a learning process based on a system of trial and error which seeks to improve imported construction systems which place themselves in a foreign context, such as the Paraguayan territory, acquires value. In this way, a Hispanic-indigenous fusion process can be established through practical interactions centered on the trades that are characteristic of this process of mestization, such as weaving, carpentry, stone-working and tapestry. Transculturalization between these two races affected the popular architecture of Paraguay, which can be seen in the use of new materials and the crossbreeding of construction techniques such as the use of palm tiles, tapia wall. In this sense the jovaia butt, as a mixed architectural typology, promotes new constructive systems for the inhabitants.

In Paraguay, handicrafts are the result of racial cross-breeding, the same transcultural process that involved language and the manifestations of art, beliefs and religion. This is how Paraguayan culture began to develop. To understand the evolution of indigenous culture and its crossbreeding with Spanish, we will focus on the studies of Salo Vera, a priest. Vera sets out the factors involved in the development of Paraguayan culture and ways of thinking: 1) the two types of culture from which the Paraguayan comes, 2) use of the Guarani language, 3) appreciation of the ecological and sociological environment, as well as its predominant character. These elements define the characteristic behavior of the Paraguayan craftsman (fig. 05).

The Paraguayan Craftsmen as an Anonymous Builder

To get closer to Paraguayan artisans, it is appropriate to review part of the exhibition 'Fotografías de Arquitectura' (Architectural Photographers) which was included in the activities of the XI Ibero-American Biennial of Architecture and Urbanism held in Asunción (Paraguay). The exhibition consisted of the photographic work of Leonardo Finotti (Brazil) and Federico Cairoli (Argentina), who promoted the architectural scene in Paraguay through a rotation of works in specialized publications, but under very different states. It's interesting to review the photographs that Federico Cairoli selected for the exhibition, since they don't focus on the contemporary architecture of this country, but rather on the value of the carnal, the physical, the crude and primitive that is characteristic of the human dimension that builds that architecture. The silent gaze of an Argentine photographer treasures the value of the human in the anonymous Paraguayan builder, capturing various moments during the construction process: the tranquility of bodies at rest during a work break (fig. 06), the process of applying plaster to a masonry wall using mortar (fig. 07), an improvised work table built from wooden props, or a work installation for the masons based on the same constructive logic as the work in progress (fig. 08).

The Cairoli frames avoid thephysiognomy of the Paraguayan builder. The craftsman is noticed in every photograph, but only partially. The photographer is entertained: he recognizes the artisan within a group by means of a general shot, captures fragments of his anatomy, or simply records his absence from the work installation. The only photograph that shows the face of one of the artisans is the intense look worn by an anonymous worker who participated in the construction process of José Cubillas’s Casa Takuri (fig. 09); a figure hidden by the shadows that compose the atmosphere of the work, and where the shadow of the artisan is projected on the textured surface of the tapia wall.

This cultural portrait of the Paraguayan craftsman allows us to enter into his attitude towards work, above all understanding that contemporary Paraguayan architecture stands out due to the value of the craftsman's trade and his work with common and humble constructive elements. Many bricklayers move between cities in Brazil and Argentina offering their services as builders; their trade is highly valued in the area. As to the Paraguayan's working capacity, Sara Vera points out: "He is capable of working hard. He doesn't take into account the time or the sacrifice when there is a need. But here we don't take necessity as something inevitable, but rather as something that arises from commitment. The Paraguayan works in the worst conditions without protest. He has never led an easy and comfortable life on the tapia wall."3

This description venerates the Paraguayan artisan and the conditions under which he develops his trade, whether that be withstanding high temperatures in different Paraguayan cities, or demonstrating patience and constancy during each stage of constructive exploration during the work. The latter is due to the fact that the artisans try to move around the site in the most comfortable way. This is not a romantic vision of the figure of the artisan, but rather seeks to establish a contemporary image of the anonymous builder.

Generally, Paraguayan artisans mobilize in groups for different works, working and transferring their knowledge. It took a long time for the local architects to find a common working method with the craftsmen, in order to establish an architecture with a local language, alien to external references, attentive to local materials, climate and the needs of the inhabitant. The idea of the group allows to concentrate a system of work that clings to the oral and material culture, maintaining the tribal attitude typical of the Guarani Indians. The factors mentioned above make it possible to state that the intelligence of the Paraguayan worker comes from his proximity to the trade and his peers. It is a constructive intelligence that arises when operating with the wood, the earth or the stone that is available in the territory, just as a social intelligence is recognized when working in constant collaboration (fig. 10).

Further on this point, researcher Estelbina Miranda outlines how the craft process is learned in Paraguay —normally under a framework of informal education— and reflects:

"The person is educated according to the lifestyle he or she experiences every minute of his or her life. This education is inconsistent, in the sense that the members of the community do not deliberately set out to educate, but arises from the spontaneous and inescapable contact of the learner with his or her surrounding world. Learning takes place without order or precise methods; it occurs naturally and spontaneously. It is a broad education. We learn by living and interacting with those around us."
Miranda emphasizes that transmission of knowledge about the craft is determined by cultural elements that make up the artisan's immediate environment. The constant interaction of the artisan with his domestic environment, and the transformation of his daily spatiality from the repeated actions he executes on the materials, articulates his constant learning.

On the other hand, the Paraguayan artisan, as an anonymous builder, as well as the materials he handles, is malleable. He can adapt to different situations typical of construction work in order to carry out his work well. Salo Vera concludes: ‘As a man who is committed to reality, it is easy for him to adapt to any circumstance in life or to any environment. If his environmental reality is changed, he immediately assumes it. He has a remarkable inner ductility that allows him to become, in a short time, practically another person with new manners, languages and interests’.

Salo Vera’s description is important since making architecture in Paraguay implies avoiding the many financial, political, climatic and human variables that constantly delay the constructive development of a work. Considering these margins of action, it is the work process. This creates a constructive laboratory where many aspects of the architectural expression of this country are decided in situ (fig. 11).

To help the reader appreciate the cultural environment in which the Paraguayan artisan operates, the following describes a day of work for a Guarani master builder from dawn to dusk. It’s interesting to trace and relate his routine. This story is written in prose, with a desire to convey a slow story. The structure is similar to that of an anonymous builder who establishes a daily collaborative relationship with the Guarani and the craftsman are authors. Bernard Rudofsky cites Pietro Belluschi and his definition of communal architecture as an art produced by the spontaneous and continuous activity of an entire people with a common heritage.

Craftsmen, together with Paraguayan architects, tend to group around a common purpose, which has meant a slow process of mutual learning developed in instances of trust in the middle of the work process. This creates a constructive laboratory where many aspects of the architectural expression of this country are decided in situ (fig. 11).

If Federico Cairoli’s photographs allow us to get closer to the Paraguayan craftsman and his working environment, then the description in prose allows us to go deeper into the human dimension of an anonymous builder who establishes a daily collaborative relationship with the Paraguayan architect. In this sense, the artisan is not a pawn, but assumes the figure of a contemporary builder (fig. 12).

**CLOSING NOTES**

The work of the Paraguayan artisan is honestly expressed through the surfaces of projects which lack ornaments and plaster. They are exhibited with the sincerity which is typical of skinless architecture. This allows us to understand contemporary Paraguayan architecture as *primitive*, taking into account the reference of Adrian Forty, who believes “primitive concept” is not a politically correct term because it tends to denigrate that which it describes (Forty, 2019,09).
Nonetheless, Paraguay’s architectural strength is in the primitive, paradoxical beauty found in denigrated structures typical of architecture built on the margins—with a limited budget and recycled materials—contributing to the current state of contemporary Latin American architecture and the value of the local.

On this point, it is worth referring to a conversation that the author of this article had with Carlos Pita, former editor of Obradoiro magazine, who answered the question: “What does Latin America bring to the contemporary condition of architecture?” in a lost hotel room located in the historical center of Asunción. Pita answered:

“I once read an interview with Sam Peckinpah when he was showing the film ‘The Wild Bunch’ (1969). A lady complained that the movie had a lot of violence and was very explicit. The director told her: “Excuse me, ma’m, but when you get shot... you bleed”. I believe that Latin American architecture is an architecture that bleeds. It faces reality, and above all, transforms it. Latin America’s contribution to the contemporary condition of architecture is the fact it is able to produce an architecture with strong roots in the local. It smells of earth”8.

Considering Pita’s words, it is worth noting that the value of Paraguayan architecture and its contribution to Latin American architectural style is based on constructive experimentation, where the architect and the craftsman investigate technical innovation through a process guided by trial and error. This process shows the risks that Paraguayan architects assume in each of their work processes, which in a totally handcrafted manner pushes each construction system to the extreme in order to explore the formal, structural and constructive possibilities of a particular material.

Considering the previous point, we can affirm that, in the contemporary architecture of Paraguay there exists a school of thought based on artisanal knowledge. This has made it possible to place Paraguay within the international architectural scene, joining an extensive network of new contemporary Latin American architectural manifestations. This small country has contributed to the discipline by valuing the construction process of the work, based on the craft of its master builders and the value of accumulating constructive experiences instead of simply dictating them from the architectural drawing. Carrying out a review on a global scale, Paraguay has contributed a reality that joins the practices currently developed in India (Studio Mumbai), China (Wang Shu) or Burkina Faso (Kéré Architecture). Peripheral contexts, where political contingency and the economic crises of recent decades have forced the focus of the contemporary architectural scene, promotes an architecture that focuses on the technique present in the hands of its masons, stonemasons, carpenters, blacksmiths and potters. It is not a novelty, but a way to place oneself in front of new scenarios offered by a world in constant change.
Pioneer materiality. Material Experimentation in the Domestic Architecture of A. Lawrence Kocher
Luis Pancorbo
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This text studies 3 architectural experiments developed, independently or associated with Albert Frey, by the North American architect A. Lawrence Kocher during the 1930’s. These experiments were based on material innovation within the construction processes. The experiments were fostered by different industrial material producers to study the feasibility of the implementation of materials in the field of architecture: aluminum was tested in the *Aluminum House*, fabrics in the *Canvas Weekend House*, and Plywood in the *House of Plywood*. All of these buildings pioneered the idea of transforming the detached single-family house into a laboratory to experiment with materials produced by industries not traditionally associated with building technology. The later move by Albert Frey to the West Coast may have initiated a new chapter in material experimentation through the Californian residential architecture developed in the following decades.

The economic and social context in which this research is situated is that of the Great Depression, beginning with the stock market crash of 1929 and extending until the entry of the United States into World War II. Some of the effects of this crisis were a shortage of housing and impoverishment which put access to existing residential stock out of reach for many Americans. This condition resulted in the implementation of policies by public administrations and private industry that favored mass scale construction of housing, shortening construction deadlines and the reduction of costs. It is in this context that the figure of A. Lawrence Kocher takes a central role.

Kocher, who is usually overlooked by the critics analyzing his work in partnership with Albert Frey
during the Great Depression, was an accomplished scholar of both American vernacular architecture and modern industrialized construction. Born in 1885 in San José, California, he studied history and architecture at Stanford, Pennsylvania State, MIT...