

Solano Benítez. Building the Future by Innovating Tradition

Marco Biagi

Paraguay hasn't got an history of architecture; at most, a tradition. Even if modern architecture has written memorable pages in the Latin American continent, it seems to have almost failed penetrating the borders of the innermost state of South America, sandwiched between giants as Argentina and Brazil, Bolivia to the west, largely surrounded by rivers' water, so much to be compared, by its most prominent writers, to an *isla sin mar* (Juan Bautista Rivarola Matto) or to a *pequeña isla rodeada de tierra* (Augusto Roa Bastos).

Le Corbusier visited its capital in 1929, at the end of his famous cycle of lectures held in Buenos Aires, Montevideo, São Paulo and Rio de Janeiro. He caught only the most folkloric aspect of the city, without reporting particular observations about the buildings or the urban planning: «Asunción seemed to me a joyful city – he writes – luxuriant, a fascinating city, with a simple, sunny cheerfulness, teeming with bright and fresh colors, all compatible with each other and linked together by the frenetic green of tropical trees».

The most important modern architecture to be visited in Asunción is a gift from the Brazilian government of Getúlio Vargas, the *Colegio Experimental Paraguay-Brasil*, designed in the 1950s by Afonso Eduardo Reidy on a hill in the barrio of Ita Pytá Punta – which, in the Guaraní language, means «tip of the red stone» – overlooking a bend in the *Río Paraguay* and the horizontal expanse of the Chaco, to the north.

The horizontal structure, suspended on a porch that makes shade and frames the landscape, is characterized by a sloping elevation, paced by giant forks of reinforced concrete, very similar to that one of the contemporary *Museu de Arte Moderna* in Rio de Janeiro. The building – that had to be the first and never completed nucleus of the future University City – was to serve for the formation of a teaching staff for higher levels of education. Extensively modified over time, it is still in use today, but also showing signs of a long period of neglect, bearing witness to the indifference of local institutions regarding great civil architecture and cultural values it embodies, both in terms of conservation and of new initiatives.

Among the metropolises of Latin America, Asunción has a modest size. The capital city of Paraguay in fact has just over 500.000 inhabitants and reaches 2.600.000 units, including the conurbation of the

suburban municipalities — in total, a third of the overall population of the country. The extension of the urbanized area however is wide, formed by a variegated fabric of medium and low density buildings, interspersed with tropical green and bedewed in a capillary manner by private vehicular traffic. The downtown is small and vaguely decommissioned. There is a decadent atmosphere, of semi-abandonment and relative neglect: there are several closed premises and shops; ghost buildings are also frequent. In recent years, the downtown has suffered the demographic decline of the old residents and the new generations preferred to move to the suburbs in search of more convenient and safe housing solutions.

«In the streets of the center — Alberto Ferlenga wrote on the 786 issue of *Casabella*, in 2010 — the *cuadras* mark out an urban space originally composed of low buildings, with occasional widenings around abandoned remnants, like the station built by the English, or monuments that commemorate a tormented history, like the *Pantheon de los Heroes* that hosts the protagonists of the disastrous wars undertaken by the Country, or the presidential palace. While in the older part of the city time seems to have been blocked by the colonial layout, further on, in the outlying areas, the residential neighborhoods develop around shopping centers or streets that are not so different from those of many European or America cities».

In the dynamics that govern the future of the city, public initiative and competitions are certainly lacking. Conversely, private commissions predominate, mostly of residential, commercial and, in the alternative, tertiary nature, which generate a minute and unstable urban material, subject to processes of constant and rapid transformation, adaptation, replacement. A triumph of impermanence, in short, and a strictly utilitarian vision of architecture.

In such a context, which doesn't seem to offer prerequisites for the development of quality construction experiences, a group of architects and teachers between the ages of thirty and fifty has taken form a few years ago, operating in close contact with one another.

Their activities raised particular interest on the international contemporary architecture scene. The elder leaders are Javier Corvalán and Solano Benítez, born respectively in 1962 and 1963, joined by many exponents of the younger generations, including José Cubilla,

Sergio Ruggieri, Sergio Fanego with Larissa Rojas and Miguel Duarte, Francisco Tómboly with Sonia Carísimo and others.

Benítez studied at the *Universidad Nacional*, during the years of Stroessner's dictatorship; Corvalán at the *Católica*. After graduation, they both travelled — in Portugal and the United States, the first, in Italy, the latter — and they built up a network of personal and collective relationships and exchanges with more disciplinary evolved areas of the *Cone Sur*. With the Paulist school of Mendes da Rocha, for example, or the Argentine *côté* of authors from a generation prior to theirs (such as Pablo Beitía and Rafael Iglesia), and even more recently, with Alejandro Aravena and the young Chilean and Mexican architects.

Thanks also to these contacts and acquaintances, both Corvalán and Benítez have developed an attitude of great mental and cultural openness, fully updated but still calibrated on the experimental horizon of Modernism rather than on the affected mannerism of the contemporary architectural languages. It is an attitude free from complexes and inhibitions, able to use the limitations of an under-developed socio-economic context to convert them into incentives for research and innovation. A research which is devoted above all to deepening the structural and constructive dimension of architecture. In this regard, while Corvalán has often shown, in his professional career, to prefer the brutalist tectonics of reinforced concrete, tested in muscular exercises on balancing the masses, Benítez rather has always preferred to dedicate himself to explore, with brilliant ingenuity and open-minded nonconformity, the unexpressed potential of an even poorer, ordinary and only «apparently exhausted» material such as brick, in its multiple technical and aesthetic virtualities.

Focusing on terracotta meant, for him, to look for an intimate connection with the Paraguayan land; with the red vestiges of the ancient Jesuit *Reducciones*, whose monumental traces, along the two banks of the *Río Paraná*, survive to evoke the epic of a failed communist utopia *ante litteram* and to testify, with their imposing foundation structures, the challenge of the anthropic to an overbearing and boundless nature. Finally, focusing on clay meant to start from the most immediately available resources and skills, assuming them with a realistic but not resigned attitude, with the ambition to reinvent and regenerate them each time in order to offer them new perspectives.

A contribution to that, obviously, was the organization of the building process, in which the designer still coincides quite often with the contractor and is called to solve problems of both constructive and structural nature during construction, in order to make up for the lack of means and economic resources. The classical «necessity mother of invention», in short. The imagination that overcomes the difficulties by devising new and unconventional solutions.

It is also for this reason, perhaps, that the architecture of Solano Benítez looks so fresh and «authentic» if compared to much of the current international production. Since the early 1990s, the Paraguayan architect has been conceiving and carrying out a personal path of study and knowledge on some possible «alternative» building uses of the *ladrillo*, exploiting each professional assignment as an opportunity for checking and testing the technical and application hypotheses elaborated in progress as a result and evolutionary variant of each other.

Already in the first headquarters of the *Gabinete de Arquitectura* — that was his very first work, completed in 1994 in the suburban sprawl of the municipality of *Villa Elisa*, within the metropolitan area of the Gran Asunción —, numerous embryonic intuitions appear that will give rise to deepening and meaningful developments in the subsequent projects.

First of all, the «paradoxical» idea of an *in folio* wall made of bricks arranged on edge, to save on material for the construction of a space of 100 square meters on a budget of just 5.000 dollars (when current construction costs ranged around 350 and 450 \$/square meter at the time). Furthermore, in order to counteract the instability of the thin wall and avoid the foreseeable «bulging» due to point load, a second singular idea was applied: to remove the section of the façade subject to maximum deflection, reinforcing it with a Vierendeel truss in reinforced brick, also utilized as a *fenêtre en longueur*.

In addition, to prevent the «overturning» of the elevation, another invention is to add the contribution of IPE posts placed against the exterior and connected by slim webs of iron rod (to prevent «punching») to the reinforcements embedded in the mortar courses. Finally, it is worth noting — in the canopy over the entrance — the first appearance of a rudimentary segment of the slab in reinforced *ladrillo quebrado*,

an idea reprised and perfected later in the large suspended ceiling of the *Casa Abu y Font*.

The executive difficulties encountered during the vertical laying of bricks arranged on edge in the construction of his own atelier, leads Benítez — in the subsequent projects for a 3 in Asunción (1995-96, no longer existing) and above all in the restyling of the Unilever offices, in *Villa Elisa* again (2000-01) — to explore the practicality of a more convenient approach: the prefabrication of panels of different formats and sizes on the ground, which can then be assembled in the construction. In the making of the large sunscreen enclosure built to disguise the modest existing shed that contains the managerial headquarters of the important Anglo-Dutch multinational, the prefabricated partitions are stiffened by brick ribs, making it possible to reach formats of 2,5-3 meters in height, which can be installed as sloping parts, with a thickness at the edge of just 3 centimeters.

The next step, in *Casa Esmeraldina* (Asunción, 2002-03), inspired by Italo Calvino's *Città invisibili*, was to introduce *encofrados*, i.e. trainers, vertical wooden formworks that can be repositioned to speed up the construction of the thin masonry. This technique makes it easier and faster to shape a brick wall in the special «pleated» configuration that gives it strength through form and makes it suitable to support the layered bands of the sculptural and chiaroscuro curtain-diaphragm on the street.

In the large *Casa Abu y Font*, designed in 2004-06 for his mother and one of his six siblings, Solano uses the «megaron» section of Le Corbusier, one of the volumetric schemes favored by the Latin American architect, perfect for defense against the oppressive heat of the local climate. For the roof of the large living area on the ground floor, extending lengthwise from one end to the other of the building, opening completely onto two opposing patios thanks to wooden doors activated by a sophisticated system of pulleys and weights, the *bricoleur* Benítez experiments with the soft bending of a *losa de cerámica armada* of 19 meters in length, hung on two Vierendeel trusses with a span of 14 m. The curved suspended ceiling is actually a sort of depressed vault that functions thanks to tensile strength and delicately shapes the unified space below. To make it, the architect augmented and rationalized the scheme first applied in the canopy of the old *Gabinete*,

making centring on which to place the bricks in a herringbone pattern, inclined by 30° with respect to the vertical position, making use of a 4 centimeters bed of sand. For every three brick courses (24 centimeters), in the transverse direction, and between the parallel rows (28 centimeters), in the longitudinal direction, reinforcement rods are inserted, while the whole arrangement is consolidated by an extremely fluid mortar that defies all standards and expectations with its optimal performance, since it releases part of its excess water to the brick and the sand, creating an ideal humid environment for the setting of the concrete. When the formwork has been stripped, the pebbled surface of the brick that lightens the slab is transformed into a vibrant visual finish for the living area below.

A few years later, the need to move the architecture studio into the basement level of the family home offered an opportunity for another experiment. The cutting of several load-bearing walls made it necessary to reinforce the slabs by grafting on atypical reticular struts in reinforced brick, made by using simple box frames of bricks with a triangular matrix as the formwork. These elements immediately revealed their enormous application potential, and today they probably represent the main area of research of the *Gabinete*. In this period, presumably, the connection arises among the research on the *in folio* walls and panels, the continuous surfaces with the «broken» brick embedded in conglomerates of reinforced and not-reinforced concrete, and the investigation of spatial structures with bars, based on the *Tridilosa* system patented in 1966 by the Mexican engineer Heberto Castillo (1928-97), in which the *ladrillo* is essentially used in the unconventional role of formwork.

The first line of research contains, for example, a work like *Casa L.A.* (Presidente Hayes, 2004-06), in which the zigzag walls of *Casa Esmeraldina* rise to an height of 7 meters thanks to the use of special *encofrados* — and, in spite of the fact that they are made with crushed material, that is rubble purchased by the cubic meter.

The second category covers, clearly enough, some of the more recent works, like the *Quincho* for *asado* made in the garden of the architect's sister Coral (Asunción, 2010), or the Sports center for the *Facultad de Arquitectura, Diseño y Arte of Universidad Nacional de Asunción* (Asunción, 2012-), currently being completed in the hinter-

land of the capital or, moreover, the installation «Rompiendo el sitio», which earned the *Gabinete* the Golden Lion at the 15th Venice Architecture Biennale in 2016.

Nevertheless, the project that leads up to the most recent experiments and marks an important moment of progress in the technique and formal research conducted by the *Gabinete de Arquitectura*, is undoubtedly the Children's Rehab Center for the Telethon Foundation, completed in 2011 at Lambaré, on the outskirts of Asunción. This is a detailed complex of spaces and equipment for physiotherapy and rehabilitation of disabled children or those with spinal lesions. Built with funds raised during the annual television marathon, the facility had to meet functional needs while also providing a symbolic, demonstrative image. The theme of rehabilitation has therefore been extended to the architecture, making it into a programmatic motif. Not only new construction, then, but also recovery and transformation of existing buildings, dismantling of edifices and *in situ* recycling of debris obtained from demolitions. For the first time, inside the administration block, the use of the centring and the broken brick have been tested in the production of a thin vault (4 centimeters thick) shaped as a catenary arch and reinforced by a diamond pattern of reinforcement ribbing. The same centring is then reutilized in a horizontal position to shape the curved panels and dividers. The next step was experimentation, in the green space of the garden, with a *boveda aligerada*, a lightened vault built in two versions with the method of prefabricated triangular formwork made with brick. Both versions serve as canopies and have a profile similar to a segmental arch. However, one located at the access to the area has a section of 25 centimeters, since the bricks are joined vertically, while the other, screening the entrance to the clinics, has a section of only 12 centimeters. Finally, another interesting technique is the application of flat brick in overturned pyramids, in *cerámica armada*, that loom like large umbrellas or trees over the upward gaze of youngsters immersed in hydrotherapy tubs, shaping the shade and functioning as a compluvia to gather and store rainwater, guided to underground cisterns. The evident affinities with the work of Eladio Dieste are rebutted by Benítez by citing the specificity of his use of only common and often discarded materials, whereas the engineer from Uruguay usually applied certified, custom-made components.

Such a distancing recalls to mind the famous distinction between «scientific thought» and «wild thought» formulated by the French anthropologist Claude Lévi-Strauss in the early 1960s, which still today conveniently illustrates the difference between the contemporary universe of specialism, precision and technological disenchantment and the practice of building in the context of slower and more backward societies. Societies where for the architect, as well as for the *bricoleur* of Lévi-Strauss, «the rules of his game are always to make do with “whatever is at hand”, that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of previous constructions or destructions».

In the inventory of Benítez's works, Telethon Center is certainly the one that, in the most evident and detailed way, shows this particular condition of the profession and the interpretation proposed by the author. The complexity of the intervention, the variety and novelty of the constructive solutions, the quality of the spaces, the modulation of natural light and the richness of the textures and the material combinations are not simple performances or answers to practical needs, but they tell twenty years of field research, drawing both a self-portrait and a manifesto. They describe a personal vision of the city, the discipline and the world.

In the small but emblematic laboratory of Asunción, the relationship with the city is implemented through a process of continuous transformation: the urgency of the primary needs doesn't leave room for fetishism of conservation or musealization. Architecture is a function, a service, not a goal. In this sense, Benítez's architecture doesn't pursue forms and figures, but it acts on the level of the means and relations of production. By doing so, it expresses a substantial rootedness in the social and cultural context in which it operates. The challenge lies in the attempt to reinvent tradition, questioning its dictates and rethinking it from the beginning. In the words of Lévi-Strauss, it is a question of «renewing and enriching the stock of raw materials, tools and fungible signs», through the use of imagination and the enhancement of all the skills and energies involved in the building cycle.

The objective is not revolutionary in itself, because it doesn't break the limits of the situation in which it is confined, but, potentially and in perspective, it can represent a useful term of comparison and a possible source of inspiration even for more advanced realities, where the ongoing global environmental crisis requires anyway sustainable remedies and alternatives to the dominant economic development model.



Solano Benítez, *Casa Esmeraldina* (Asunción, Paraguay 2004)

1
The main front
© Leonardo Finotti.



Solano Benítez, *Casa Abu y Font* (Asunción, Paraguay 2006-07)

2
The main front
© Leonardo Finotti.



Solano Benítez, Children's
Rehab Center for the Telethon
Foundation (Lambaré,
Asunción, Paraguay 2010-11)

3
The entrance path
© Leonardo Finotti.



4
Structural framework
of the entrance path
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5
Interior view of the main space
© Leonardo Finotti.