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Front cover: A detail of the main hall of the Michigan Central Station before the current preservation and reuse project was undertaken. Photo courtesy of Quinn Evans. See page 146 for the full story.

Back cover: Brick vaults made by the firm Cúpulas y bóvedas, based in San Bartolomé Actopan, Estado de Mexico. Photo courtesy of Víctor León Cruz. See page 92 for the full story.

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Architecture and Place

MARÍA MARGARITA SEGARRA LAGUNES

Hecho con las manos, el objeto artesanal guarda impresas, real o metafóricamente, las huellas digitales del que lo hizo. Estas huellas no son la firma del artista, no son un nombre; tampoco son una marca. Son más bien una señal: la cicatriz casi borrada que conmemora la fraternidad original de los hombres.

—*Octavio Paz,* La artesanía el uso y la contemplación

A geographical, historical, and cultural mosaic, Mexico today appears to be conditioned by the contradictions typical of globalized societies. On the one side, it boasts a rich and multifaceted historical legacy founded on a centuries-old tradition that forms the basis of a cohesive national identity; on the other, the increasingly strong temptation to adhere to models imported from afar is gradually permeating customs, traditions, practices, and beliefs, steering the country toward strongly homogenizing processes.

While it is true that those processes are still advancing slowly in many communities, it is equally true that the consequences of accelerated development are becoming visible where the incursion of those forms of globalization has already transformed the harmonious ensembles that seemed, until a few years ago, fully embedded in the environmental, economic, and social context of the various regions.

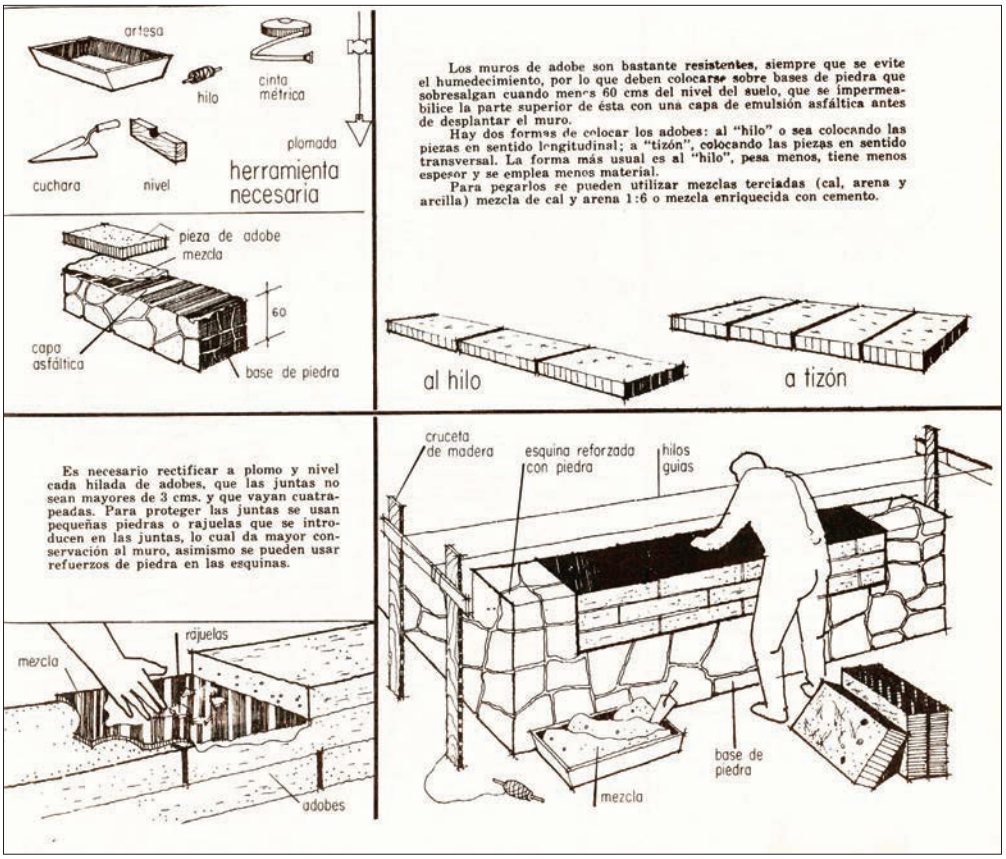
The harmony and balance had been achieved thanks to those peaceful and symbiotic ways that inhabitants engaged with their surroundings, using raw material and time-tested procedures to build their habitat, and confirming those solutions that, over time, have achieved the best results.

The constructive tradition that spans the centuries is an inalienable collective good, one that evolves according to different rationales, not necessarily coinciding with contingent or incidental events. It is what Igor Stravinsky defines as "anything but habit, even excellent habit, since habit is by definition an unconscious acquisition that tends to become mechanical, while tradition results from a conscious and deliberate acceptance. A genuine tradition is not testimony to a remote past; it is a living force that animates and nurtures the present."[1]

It is, therefore, an intangible heritage, embedded in the genetic code of peoples, progressing at a slow pace and, at times, advancing "accompanied by a proud resistance to the contamination of new models, coming from 'centers' characterized by higher rates of innovation," thereby giving rise to "extraordinary scenarios of architectural and environmental homogeneity."[2]

These scenarios form rich and varied collages: from Baja California to the Yucatán, they testify to building practices linked to the availability of materials, climate, and latent hazards—earthquakes, floods, or torrential rains, to name but a few—which architects have, throughout the ages, been forced to come to terms with in an attempt to give coherent answers to the inhabitants, with their customs and local economies.

Today, however, those ensembles are changing. The results are visible at a glance: banal constructions disconnected from their context, made with foreign and, above all, more expensive materials, are breaking those centuries-old evolutionary chains, introducing elements of discontinuity that entail the gradual loss of traditional building knowledge.



This page, top: Figure 1. Construction of adobe walls, illustration of the Manual del Campesino, *published by the Secretaría de Educación Pública in 1936. Bottom: Figure 2. Brick vaults made by the firm* Cúpulas y bóvedas, *based in San Bartolomé Actopan, Estado de Mexico. Photo courtesy of Víctor León Cruz.*

It is therefore urgent to encourage initiatives aimed at recovering and properly valuing those practices before it is too late and such processes become irreversible. This urgency does not flow from nostalgic regret for times gone by, but from the desire for an authentic and sustainable form of relating to the surrounding environment.

In 2016, with the title *Unfoldings and Assemblages*, Mexico's national pavilion at the 15th International Architecture Exhibition in Venice presented the work of those who have been engaged for years on the social front, far from the easy (and sometimes futile) seductions of contemporary architecture.[3] More than two hundred proposals were submitted, responding to the national call launched by the Instituto Nacional de Bellas Artes (Secretaría de Cultura), an institution that promotes, through its Directorate of Architecture, Mexico's participation in the Biennial. Of this immense and diverse body of work, thirty-one projects were exhibited. The works presented testify to the efforts of architects, engineers, students, economists, anthropologists, sociologists, and communities to improve the living conditions of the inhabitants not only of distant and isolated rural clusters, but also of those peripheral areas that have spontaneously sprung up around large metropolises—first and foremost, Mexico City.

Opposite page: Figure 3. Construction of haystack houses in Ciudad Juárez, Chihuahua. For more than fifteen years, architect Juan Casillas, Guillermo Galindo Reyes, and the Chopeke Collective have designed constructions with straw bales and other residual or recycled materials. In the model house for the Rarámuri communities, the use of straw contributes to improving thermal conditions, structural resistance, and reducing execution costs. Photo courtesy of Juan Manuel Casillas Pintor and Colectivo Chopeke.

This page: Figure 4. Since 2014, architects Mariana Ordóñez Grajales and Jesica Amescua Carrera have organized technical-construction workshops with the local population in the community of Tepetzintán, Puebla, using bamboo as the main material to design new homes. Photo courtesy of Comunal.

The variety of works presented highlighted how those who set out to steep themselves in the real problems of the population can provide concrete and brilliant solutions—not only by coming up with new answers, but by recovering an updated, time-honored tradition of collective work and self-management, which the phenomena of modernization have increasingly removed from the daily dynamics of the country. These works focused not only on the construction of houses, but on the building of schools, hospitals, and public spaces and places for the population to meet, socialize, and recreate: works that historically have been strongly rooted in different social contexts.

From this vantage point, the protagonists of these building projects become the inhabitants and artisans of the various trades—masons, stonemasons, plasterers, blacksmiths, carpenters—sometimes joined by architects who, on the front lines or behind the scenes, have for decades dedicated their lives to sharing their skills with those actors.

In the background of this industriousness is the influence that the *Self-Construction Manuals* had in the country throughout the twentieth century. Since the 1930s, these manuals collected and disseminated easy-to-understand construction techniques and systems with the aim of meeting the demand for housing and rural or community buildings by using local materials. A forerunner of these publications is the *Manual del Campesino*, published by the Secretaría de Educación Pública in 1936 and addressed to rural teachers so they could disseminate the information in the local area: "a manual free of complications and technicalities, accessible to any intelligence, which will yield practical results if those whose hands it reaches devote themselves to applying it to their daily lives"[4] (Figure 1). These manuals were followed by a long series of publishing initiatives (for example, Mariana Yampolsky's[5] extraordinary photographs and Valeria Prieto's[6] studies and research) that would find, not coincidentally, the point of greatest diffusion between the 1970s and 1980s, a time when modern systems and materials, based mainly on reinforced concrete technology, became more popular in the construction industry. In this sense, *architecture without architects* is of particular importance in small and medium-sized communities, where the ritual persistence of building types, in spite of the continuous aggression of modernity, preserves unaltered for-

mal and technical solutions strongly anchored in the daily life of the population as the identifying character of place. Proof of this is the exceptional inventiveness and execution skills of the master masons who specialize in the construction of brick vaults and domes. Based in the small town of San Bartolomé Actopan, Estado de México, Víctor León Cruz's firm *Cúpulas y bóvedas* has been making unique pieces of unquestionable beauty for more than fifty years. With the help of a simple trestle, a single worker, sometimes with an apprentice, is able to make brick vaults or domes with consistent spans and adorned with original geometric patterns (Figure 2). But this is a widespread tradition also found in other regions where skilled masons compete in speed of execution to make vaults and domes of all sorts and sizes, as well as *temazcales*,[7] ovens, fireplaces, and other domestic buildings.

Alongside these scenarios are increasing efforts to surpass tradition without denying it. By reinterpreting the use of local materials and techniques to achieve new architectural solutions, these efforts are more economical, sustainable, and embedded in the cultural and environmental context. Consider the trials that architect Juan Manuel Casillas Pintor with Guillermo Galindo Reyes and the Chopeke Collective have carried out in the state of Chihuahua for the Rarámuri communities of the Sierra Tarahumara and in Ciudad Juárez (Figure 3), or the experimental laboratory set up by Mariana Ordóñez Grajales and Jesica Amescua Carrera, of Comunal Taller de Arquitectura, in Tepetzintán (Puebla). Through the creation of training sites for the workers, Comunal Taller de Arquitectura built a house with a bamboo structure and prefabricated elements, adapting local typologies to modular construction processes and progressive growth. Today, that house is used as a community center and is the model for further housing (Figure 4).

Similar in spirit and orientation are the achievements in San Miguel Amatitlán, in the Sierra de la Mixteca (Oaxaca). Houses designed by architect Juan José Santibáñez were built in the village by local women who produced the *adobes* in unfired earth, setting up the walls one by one

Opposite page, top: Figure 5. Juan José Santibáñez, courtyard of the Museo Textil de Oaxaca, with the original use of traditional brick for the construction of the walls. Photo courtesy of Juan José Santibáñez. Bottom: Figure 6. Fernanda Canales, courtyard of the Recreo House in Valle de Bravo, a contemporary interpretation of the traditional patio theme. Photo: Rafael Gamo.

This page, top and middle left: Figure 7. Production of unfired brick, perfected through a pressing system developed in Italy by researchers from the Polytechnic University of Turin, used for the construction of the community center of Xoxocotla, Morelos, designed by architect Federico Collela. Photo: Jaime Navarro. Right: Figure 8. Cuexcomate Community Center in Xoxocotla, Morelos, designed by Federico Collela. Photo courtesy of Federico Collela. Below: Figure 9. Aerial view of the Oral Indigenous Court of Pátzcuaro, Michoacán, designed by Taller de Arquitectura Mauricio Rocha + Gabriela Carrillo. Enclosed by a masonry wall, the offices inside alternate with gardens and open spaces that bring light and transparency to the activities that take place there. Photo: Rafael Gamo, Onnis Luque.

until sixteen dwellings were completed. More recently, Santibáñez has designed the Museo Textil in the city of Oaxaca (Figure 5). Sponsored by the Fundación Alfredo Harp Helú, this is a contemporary addition that adjoins the eighteenth-century Antelo house, which was built by a wealthy Spanish merchant who amassed his fortune from exporting cochineal grain. The curtains of exposed brick, proposed for the interior covenants, become almost tapestries, fine fabrics that hang from the walls, effectively dematerializing the wall while reminding us of the property's function. Those fixtures, which at first glance call to mind Islamic courtyards and Mudéjar and Maghreb traditions, are instead entirely invented and constitute the architect's original contribution. Perhaps the ultimate but unstated aim is to evoke, in a wholly contemporary key, the complex textures of the Miztec facades of nearby Mitla.

Along with the aforementioned initiatives, a number of works by contemporary Mexican architects must be mentioned; by resorting to paradigmatic typologies of tradition, they tackle design themes by connecting to memories —perhaps unconscious—but unequivocally linked to places. Consider, for example, Fernanda Canales's design for the Casa Recreo, a dwelling in Valle de Bravo (Figure 6): the archetypal patio house, with rooms arranged around an open garden, echoes the courtyards of monastic cloisters or the houses that, from Pompeii onward, have captured the imagination of architects. But a specific intention—in this case, the use of stone for the walls and floors, and wooden structures for the trusses and ceilings —gives the whole a familiar and comfortable feeling, making it fully participate in the spirit of the place.

Adobe and bamboo are the main materials behind the recently completed Cuexcomate Community Center, located in the small community of Xoxocotla in the state of Morelos. In this case, Federico Collela, an Italian architect who has been transplanted to Mexico for a few years, uses the unfired brick technique perfected through a pressing system—obtained with BTC blocks technology, developed in Italy by researchers from Polytechnic University of Turin. This gives greater compactness to the material, further improved by the male-female connections. The materials, mainly rods and clay, are cheap, readily available on site, and, above all, maintainable, which guarantees that subsequent maintenance interventions can be carried out with local labor (Figures 7 and 8).

For their part, Mauricio Rocha and Gabriela Carrillo, in their otherwise copious and wide-ranging work, often return to the varied suggestions offered by a tradition as diverse as the regions of the country. Their Indigenous Courts building in Pátzcuaro in the State of Michoacán is very significant (Figure 9). Pátzcuaro is a special place where the fusion of indigenous customs and practices with Spanish colonial input has resulted in an extraordinary palimpsest that daily nourishes the inhabitants' sense of pride in their identity. There, Rocha and Carrillo create a special space: from the outside, the courts building is airtight, a shell concealed by a sturdy stone wall. Inside, patios and gardens alternate with solids, creating striking effects of transparency—an emblem

Opposite page: Figure 10. Taller de Arquitectura Mauricio Rocha + Gabriela Carrillo, studio house for photographer Graciela Iturbide, in which the use of brick is tested in all its potential. Photo: Rafael Gamo.

This page: Figure 11. Maurizio Rocha, Sound Pavilion, in the Museo Laberinto de las Ciencias y Arte in San Luis Potosí. Rocha uses very few elements to shape a poetic and timeless space. Photo: Luis Gordoa.

of democracy—but also of light and shadow, of protected spaces and open rooms.

In Mexico City, on the other hand, in a neighborhood still marked by the Spanish building legacy, they designed the studio house for photographer Graciela Iturbide. They experiment with the innumerable expressive potentialities of brick, *el tabique*, in the exposed facings, the flooring, and in the creation of perforated walls—the *celosías*—inspired by the Islamic tradition (Figure 10).

Finally, a project by Mauricio Rocha: the sound pavilion in the Museo Laberinto de las Ciencias y Arte in San Luis Potosí. Made in 2008 with very few elements, the pavilion refers back to the most archaic origins of architecture: an enclosure and a shelter. The enclosure is made of stone blocks of substantial size, almost forming a cyclopean masonry; the shelter-covering consists of an iron beam and a wooden beam frame. Gracing this site are a tree and three huge stones: the lone, solitary users of this poetic and silent space destined to transcend time (Figure 11).

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1 I. Stravinskij, *Poetica della musica* (Pordenone: Edizioni Studio Tesi, 1987), 42.

2 M. Manieri Elia, *Barocco leccese*, Introduzione (Milano: Electa, 1989) 12.

3 Pavilion Commissioner: M. M. Segarra Lagunes; Curator: P. Landa Ruiloba; Pavilion Design: TUUX, Museography: J. Garibay, D. Osnaya. Technical Committee: M. C. García Cepeda, X. Guzmán, D. Martínez, E. Alva, J. F. Serrano, P. Landa, J. Sánchez, J. J. Kochen. See Aa. Vv., *Despliegues y ensambles. Unfoldings and Assemblages* (Mexico: Catálogo del Pabellón de México 15a Muestra Internacional de Arquitectura de la Bienal de Venecia, Secretaría de Cultura, 2016); see also M. M. Segarra Lagunes, "Padiglione del Messico: dispiegamenti e assemblaggi," in *Rassegna di Architettura e Urbanistica* 149 (2016): 24–29.

4 G. Vázquez Vela (Secretaría de Educación Pública), *Dedica*, in R. Galaviz and V. J. Moya, Manual del Campesino (Construcciones rurales), México 1936, s.n.p.; see also *Manual de Saneamiento* (México, 1976).

5 M. Yampolsky and E. Poniatowska, *La casa en la tierra* (México: INI-FONAPAS, 1980); M. Yampolsky, *La casa que canta* (México: Secretaria de Educación Pública, 1982).

6 V. Prieto, ed., *Vivienda campesina en México* (México: SAHOP, 1978); V. Prieto, ed., *Manual para la construcción de la vivienda rural* (México: SAHOP-COPLAMAR, 1981).

7 Vaulted structures for steam baths inherited from pre-Hispanic tradition.