



ARCHITECTURAL PROTOTYPE FOR AN UPCOMING DISASTER

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Architectural Prototype for an Upcoming Disaster is a critical exercise around housing policies, suburban architecture and household, labor, exploitation and transformation of the landscape and negotiation in the border.

1 The differences between suburban architecture in California and Baja California—and more broadly between US and Mexico—are evident concerning materials and structural design. While the timber-framed building has become the basic form of American suburban housing, in Mexico, most houses in outlying areas are made with bricks and mortar. Availability, price and durability of materials are the main factors that determine the kind of houses that are built in an area. But other factors such as the weather and the cultural traditions of a region's inhabitants are equally important in the development or adoption of an architectural style.

Structural differences between framing and masonry are primarily due to weight distribution. In the case of masonry, walls carry the weight, and a skeleton or framework in the case of framing. These structuring processes presuppose a different understanding of the architectural space and the household. Framing, be it wooden or steel, heavy or lightweight, implies the visualization and construction of a building as a finished one-piece structure. The frame can be fabricated in sections (for example, in platform framing each floor is framed as a separate unit) but it needs to be conceived, planned and constructed as a single entity. On the contrary and even though masonry also starts from a design, this plan may be modified while building or after building, since the structure is conceived and constructed by the use of separate units. This is especially true when building houses or small buildings since the foundations and pillars of larger constructions need to be fully calculated and determined from the beginning of the process. A two-bedroom house may need an extra room when the third child of the family is born; another floor when the grandmother needs to be cared for and comes to live in the house; another room and kitchen when the daughter gets married and economic circumstances prevent her from having a house of her own. Self-construction is not a mere choice; it is economically determined. Masonry and its discrete units of architecture that can be added and removed according to need is more suited for self-construction than framing. Framing conceives the household as a finished entity, while masonry leaves the possibility of the transformation of space significantly more open.

It is now common to see American architecture inspired houses all around Mexico, specifically within communities of relatives of migrants in Oaxaca, Michoacán and Puebla. But the materials (bought with the money sent through wire transfer) and the construction methods remain the same: self-constructed masonry is the most common construction method in low socioeconomic areas in Mexico. Families usually grow in a very different rhythm than the household economy, and constant adaptations to the architecture are needed. Traditional clay bricks align in the same



construction with cheaper concrete blocks. The rows of different colored bricks and blocks reveal the different phases the family has gone through, both economically and in number of members. As such, the landscapes of these communities are in constant transformation.

In recent years, a very different model of construction has become prevalent in Mexico. Huge housing developers such as Casas Ara, Casas GEO and Casas URBI have transformed the suburban landscapes. Since the 1990s these developers have built enormous low-income housing developments all around the country (and even in other parts of Latin America). Complexes of hundreds and sometimes thousands of identical *social interest* houses are meant to ensure that every citizen has access to a “decorous and decent house” as stated in the Mexican Constitution,

“Se considerará vivienda digna y decorosa la que cumpla con las disposiciones jurídicas aplicables en materia de asentamientos humanos y construcción, habitabilidad, salubridad, cuente con los servicios básicos y brinde a sus ocupantes seguridad jurídica en cuanto a su propiedad legítima posesión, y contemple criterios para la prevención de desastres y la protección física de sus ocupantes ante los elementos naturales potencialmente agresivos.”¹

The federal government through the Infonavit, the Mexican National Workers’ Housing Fund Institute, which establishes the maximum price and minimum dimensions and requirements to guarantee the functionality, habitability, physical security and sustainability of *social interest* houses. The minimum area the Infonavit established (but hopes to enlarge soon) for a *social interest* house is 36 square meters (118 square feet). These subsidized houses can be bought with federal loans controlled by the same Infonavit, the largest mortgage lender in Latin America. Two decades after its establishment in 1972, the Infonavit enabled the outstanding growth of several national developers of *social interest* houses like Casas GEO.

These symmetrical uncanny constructions lead to the demystification of the household by repetition. The intimate and unique space of the family house (home) is contrasted with the dull and distant space of the low quality *social interest* houses (accommodation). It isn’t surprising to know that thousands of the houses built and sold by these firms are being abandoned every year in the country. Financial debt is one of the main reasons but insecurity, lack of employment and basic services nearby the isolated suburban communities are important factors in the transformation of these complexes into “phantom cities.” Buyers have publicly complained about the fraudulent activities of these housing developers, especially because they constantly fail to fulfill their promises. The abandoned These symmetrical uncanny constructions lead to the demystification of the household by repetition. houses are usually stripped from every construction material that can be taken away (cables, aluminum frames, windows, etc.) and many times occupied illegally. The “dignified” housing deteriorates and thousands of families’ judicial security is revoked when they lose the legitimate possession of their property. This model of social housing seems fallacious since it involves the rearrangement of families in the suburban space in a process that can easily be related to other forms of displacement that are triggered by systematic violence, such as gentrification and the displacement of families because of (drug) violence.

2 It is more likely that they will end up dismantled, burned or demolished to make space to continue building a neoliberal project that continues to be disguised as *social interest*.

The inhabitants of Cerro Azul have an intimate relationship to the land: the brick and pot makers extract and mold the soil on a daily basis, they know its composition through color, texture and pastiness, they have learned to mix it in order to obtain different colors and strengths of tiles and bricks. Most of the bricks are hand-made — as half of the bricks elsewhere in Mexico. The only mechanized brick workshop in Cerro Azul still uses artisanal techniques to bake and make custom-made bricks. There are no paved roads, only soil. Scattered in the hill most of the houses are made with bricks and are usually left unfinished (*en obra negra*) due to both aesthetic and economical factors.² Most of the self-constructed houses are one-story, but some fancier more elaborate two and three story houses can also be seen. The inventiveness of their inhabitants can be perceived by the different styles of arches, domes and windows made with different kinds and sizes of bricks. The town has a soothing monochromatic aspect. Bluish smoke floats between the houses, coming out from the kilns.

3 Don Bernabé worked for three days together with his two apprentices (his son and his nephew) in the artisanal manufacture of five thousand scaled bricks. After being Once baked, they were transported downhill, to a lot next to the Tecate-Ensenada highway where, in collaboration with architect Rubén León and contractor Francisco Soto, both from Tecate, an architectural prototype of a masonry house was built. Instead of using ephemeral architectural model materials such as cardboard and balsa wood, the prototype was constructed using exactly the same materials and procedures as an actual scale brick house. It isn’t an architectural model in function in the sense that it because it isn’t intended as a reference for building an actual scaled house. The prototyping aimed at approaching, investigating and documenting the nature of materials and processes of construction and not at modeling a future house.

The prototype was built imitating the self-construction processes that are common in outlying, low socioeconomic areas in Mexico and around the world (especially in Latin America and Asia) such as Cerro Azul. The starting point for the construction was a simple blueprint that considered the minimum housing area for *social interest* housing. according to Infonavit: 36 square meters. Since The house was intended to move across the border and installed in San Diego, creating an ironic “shrinking exercise” was executed through scaling. The 36 square meters became 36 square feet. The one story house gradually grew and was transformed into a until it became a two-story three-bedroom, two bathroom house with a terrace. It took almost two weeks in February of this year to build the “dignified and decorous” house with the help of two 2 full time and two 2 part time builders. When finished, the prototype was mounted on a platform—as if it was a timber-framing house³—and exported from Tecate, Baja California, to the other Tecate—following the inverse route a timber-framing house would ordinarily follow to be sold in Mexico.

After its journey, the brick house was installed at the Structural Materials and Engineering (SME) bBuilding’s Visual Arts Gallery at UC San Diego. The brick house