3. FIELD STUDY: BUILDING AND FUNCTIONAL CHARACTERISTICS OF CIUDAD NEZAHUALCÓYOTL

What differentiates a group of blocks or even one building from another, and which categories or “prototypes” are the most suitable to identify such differences? In the following chapters, three aspects will be explored in an attempt to answer to this question.

The first aspect refers to how the buildings in an informal settlement can be recognized according to general characteristics such as density and/or consolidation. The second aspect refers to specific construction and design qualities shared by houses for example construction elements (distribution of doors and windows), colors and shapes. An attempt will be made to link the first and the second aspects at the scale of the city. The final part of this section will draw a comparison of all the information discussed up to then.

3.1 Building typology: from Brick walls to the multi-storey building

Capturing the differences of consolidation requires above everything else a differentiation unit. In this work the building was chosen as the basic differentiation unit on the assumption that the construction environment directly reflects the development of a settlement: almost 2000 buildings from 48 different blocks were photographed and drawn and a total of 20 different typologies were identified and are shown in the following:
3.1.1
Types of informal building, Ciudad Nezahualcóyotl and Chimalhuacán, Mexico City
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters

9 Meters
Brick walls

After 50 years from the beginning of its urbanization, one can still see the first steps of the informal building in Ciudad Nezahualcóyotl. At this stage the physical structure is the easiest to see: a 4x4 modular concrete skeleton, filled with bricks or stones of concrete. This structure may be covered with a concrete or a slightly sloping roof which outlines (when looking from the street) the limits between the room and an internal courtyard.
NORMAL HOUSES WITHIN THE BLOCK
Windows

When the house acquires window openings, a visual relation to the street begins. The perforations may be placed on one or both sides of the door. The complete façade remains either without or only partially plastered. Particularly the corners may be used for small commercial activities. Due to the fact that many walls had not been completed finished, they are often used for commercial or political advertising.
NORMAL HOUSES WITHIN THE BLOCK
One storey house

Through color, the entrance to the house may be emphasized. Color may also be used to give hints of elements from a vernacular architecture like the “guardapolvo” or as dust-protector: a 1 meter ribbon which articulates the house to the street. Such a ribbon is normally colored with acrylic paint, to ensure an easy and periodic cleaning of the wall to avoid corrosion. Pregnant colors also serve as orientation elements in the informal building landscape, especially in still consolidating blocks.
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters

9 Meters
Commercialization begins

Often two or three plots are typically combined together in order to open a store in locations with good access. If that is the case the proportions of doors and windows change drastically: the façade is completely perforated and covered with glass or iron curtain walls. A variety of colors in the facades correspond to the diversity of its use. Auto repair garages, drugstores, bars and fitness studios are just but a few examples. The presence of stores also influences the use of public space because part of the street becomes a private space for clients and providers.
NORMAL HOUSES WITHIN THE BLOCK
The one storey house begins to expand

It is not difficult to predict the form that a second floor, -once built-, will take, even if its construction takes a long time. The windows may be placed symmetrically or the second floor may just be built on half of the plot, leaving the area of the courtyard free.
NORMAL HOUSES WITHIN THE BLOCK
The building process of the 2nd floor of the informal building doesn't occur automatically but rather one step at a time. An approximately 4x4 meters wide room on the second floor signalizes where the densification process begins. This room is built on one or the other side of the plot. Sun exposure or wind direction seem to play no role in deciding which side of the plot will be built; even in contiguous houses the verticalization may start in opposed directions. The second floor may be illuminated and ventilated through the street or through the courtyard.
NORMAL HOUSES WITHIN THE BLOCK
The “L” house

Later on other rooms are added to the already existing room on the second floor. The new rooms are all aligned on the same side of the house. Once the new rooms are built, the house is plastered and colored and an “L” form defines the new façade.
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters

9 Meters
“L” house with variations

The forms of the building process are not just copied but are also repeated in a mirror-like reproduction. In this case, no radical qualitative differences seem to exist, and surprisingly the façades are quantitatively almost the same.
NORMAL HOUSES WITHIN THE BLOCK
The two storey house under construction

The consolidation of the façade may be comparable to a clock like façade. The entire façade, half of it or just three quarters can get plastered.
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters

9 Meters
Half plastered two storey house

Especially if the first floor of the corner building is occupied by commercial activities, the densification of the plot develops faster. If this occurs, the entire second floor is built at once, leaving no internal spaces nor a courtyard. In this case half of the building that is plastered is used as a store, while the other half remains under construction.
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters
9 Meters
The plastered two storey house

The façade of the two-storey house may be very heterogeneous. The façade may be massive with only few windows overlooking the street. The relation to the street may be more open in case a store is adapted on the first floor. More traditional finishes can be found, such as sloping roofs and simulated stones facades.
The two storey house with variations

A saturation of the front side signals that the densification of the rest of the plot is still in progress. The new rooms on the second floor may be built on any place on the plot. The built spaces are articulated by balconies or terraces. With this densification the courtyard begins to lose lighting and ventilation.
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters

9 Meters
The two storey house with commerce

Qualitatively, the two-storey building, designated for commercial purposes, does not differ much from the one-storey building: land use ranges from auto to medical services and it is common to find two or more commercial buildings merged together if the location is good or if some spontaneous commercial specialization has taken place such as building materials or furniture stores.
NORMAL HOUSES WITHIN THE BLOCK
The two storey house with intensive commerce

Paradoxically, as the functions of the buildings increase, they become visually lighter: at the street level, in most cases, only the columns are left to ensure maximal visibility and access. Aligned with these doors are the windows of the upper floor, which are placed to illuminate and ventilate an office or a rented apartment.
NORMAL HOUSES WITHIN THE BLOCK
The expanding house under construction

To the original “L-shaped” façade other rooms are adhered in form of patches. On the top of the house a third floor may begin to form with a provisional iron-sheet roof supported by columns, precisely the same manner as in the very beginnings of the informal building. With time the iron sheets are replaced by a concrete roof and the skeleton is filled with bricks. In other cases the densification takes place but the courtyard remains and as a result the façade takes the form of a small tower.
NORMAL HOUSES WITHIN THE BLOCK

APPROXIMATED SCALE

3 Meters

9 Meters
The plastered expanding house

When the room on the top receives a plaster coating, the building and the perspective changes: the building seems higher because of the small erected tower. The building gets a different expression too, a different one than that of a house. Small windows on the top signify a complementary use.
The multi-storey building under construction

The word “contrast” may be used to describe the façade of the building: unfinished and almost abandoned rooms on the top, and intensive commercial activity at the street level contained within plastered and colored rooms.
NORMAL HOUSES WITHIN THE BLOCK
The plastered multi-storey building

Multi-storey buildings located on the corner of a block differs greatly from those located in its center. The ones in the middle are used as housing apartments with a repetitive typology, whereas the corner buildings are occupied by dense commercial activities, this in turn influences the size of the doors and windows, in order to take maximum advantage of the location.
NORMAL HOUSES WITHIN THE BLOCK
Multi-storey building with variations

If the multi-storey buildings are built by professionals, the spaces are clearly differentiated according to their functions: the entrances are accentuated with different materials or size; a separate volume is used to contain the staircase; terraces and balconies are placed and the first floor may be slightly displaced from the rest of the building.
NORMAL HOUSES WITHIN THE BLOCK
The multi-storey building in expansion

The limit of the construction density seems to stop at the fourth or the fifth storey. This type of building may be built traditionally or professionally. The fourth storey may be built all at once or it may start with a small room which develops step by step just as in the previous examples.