

4. TOWARDS A GEOGRAPHY OF INFORMALITY: CONCLUSIONS AND OUTLOOK

Informal settlements are always under social and spatial changes and therefore result in internal differentiation. As a consequence, the “parameters” to capture the internal differentiation also vary in the long term as they are primarily defined in relation to the growth stage in which the settlements are passed through. As is the case of Ciudad Nezahualcóyotl.

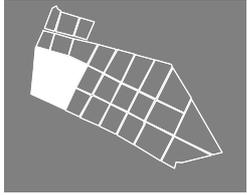
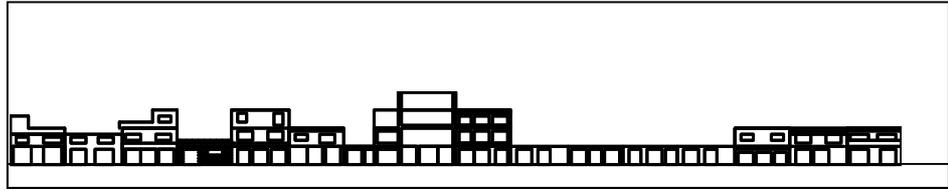
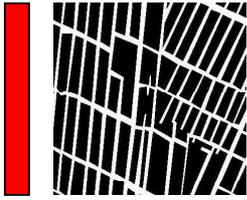
A first differentiation for the city of Nezahualcóyotl can be traced back to the beginnings of the urbanization process in the 1970's. During this stage, a differentiation was not much the expression of individual needs, but an expression of collective needs; needs which were felt not just by a small group of inhabitants, but needs felt by the entire population: houses with infrastructure, houses with legal ownership, construction of public facilities in the neighborhoods and the like.

As the settlement expanded and their population grew, the social and physical characteristics became increasingly complex, as did the “parameters” to capture this complexity. These parameters included a mixture of consolidated and non consolidated houses, families with different needs, as well as the commercial function of the neighborhoods. The latter, became even more complex considering that, with time, the functional differentiation is relative to the needs of the local population, but also relative to the population of the surrounding.

Based on the collected information for the Ciudad Nezahualcóyotl case study, the social and spatial differentiation of the city will be briefly discussed: a current picture which, considering the nature of the informal city, it represents merely a “snapshot”, a momentaneous picture which probably by this moment, has already changed.



4.1 Ciudad Nezahualcóyotl: between formality and informality



4.1 Urban Articulation Area

The effect of time can be observed in this area better than elsewhere. As the *First Settlement Area*, it was developed before official restrictions on the size of plots, streets and public areas were introduced. For this reason, this area has a rather irregular spatial structure: there is no a clear hierarchy of streets; the streets are not parallel to the rest of the city and public facilities are not equally nor clearly distributed. This spatial irregularity has been perhaps one of the main factors which have hindered a functional integration to the Metropolis, despite its direct proximity.

Historically, and due to the rapid densification of this area, the first upgrading measures here were carried out faster than in other areas of the city, but the picture today is a very different one.

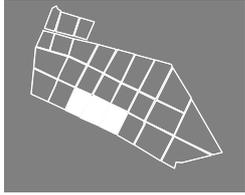
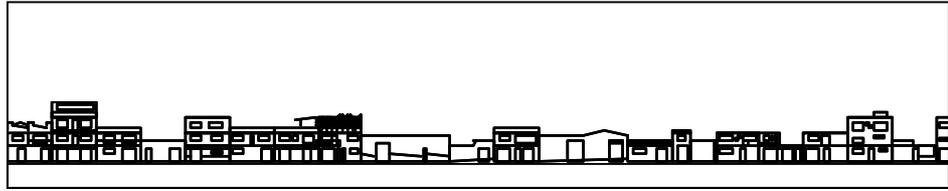
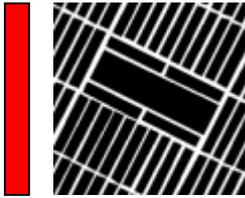
On the one hand, many of the “original consolidators” have returned or have emigrated to their States of origin. The remaining population is composed mostly by young families; most of them are tenants and recent immigrants in the city. The level of education and income of the new inhabitants is low compared to the rest of the city. Signs of a “gentrification wave” or immigration of higher income groups is not the case at all sights, but a phenomenon of “Strata substitution” seems to be the predominant one.

On the other hand, the degree of physical consolidation in this area is high (more than a half of the buildings are *saturated* or *verticalized*), yet so is the percentage of houses without durable materials or enough infrastructure like drink water. This area contains the highest percentage of rented houses of the city (more than a third of the houses are rented) and, considering the high number of houses for sale there and the low demand for them, the Real Estate Market here could be considered merely inactive.

Together with the infrastructure problems, a low attention to the revitalization of the existing houses on the side of the –few- owners is evident, so that the general view is of decay and decreasing quality of the buildings, which in turn, favour the further emigration of “consolidators.”

Functionally, the type of commerce which developed in the area is relatively traditional and specialized: commercial strips of clothing, auto parts and a meat market, whose merchandise are introduced to the city by large trucks or food containers which pull over in the periphery of Ciudad Nezahualcóyotl, along the metropolitan ring.

In spite of all the problems, due to its proximity to the Metropolis, this area has perhaps the highest improvement potential at all. If the majority of the owners do not live here, a conversion of land use or replacement of buildings could be an option for upgrading, if not a policy for renting, which benefit so much as possible to the owners, to the renters and to the public interest as well.



4.2 Main Corridor Area

The area has a regular spatial structure and it belongs to the *Old Settlements Area*, it was occupied by the end of the 1960s.

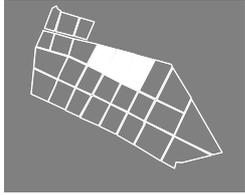
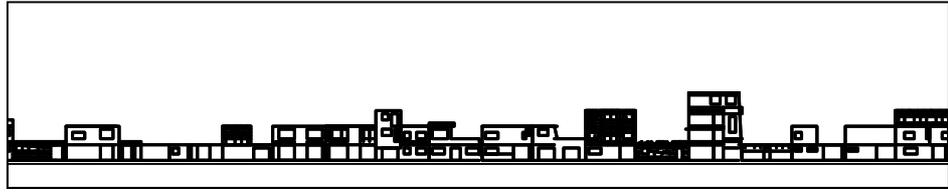
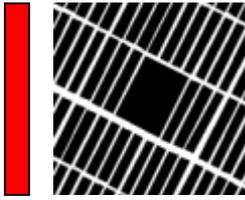
The connection between this area and the Metropolis is the best of all the areas. The avenue which goes through the middle of the area has the largest section of all the avenues and these connect Ciudad Nezahualcóyotl to the metropolitan ring. The accessibility here was further increased thanks to the construction of a metro station, just on the crossing between the main corridor and the metropolitan ring. If one comes to Ciudad Nezahualcóyotl by foot, it takes just a few minutes to walk from the metro station to the “gate” of Ciudad Nezahualcóyotl.

Along the main corridor all kind of commerce is located: from specialized and traditional ones -like parts for sewing machines-, to fast-food chains and huge stores for construction materials. This main corridor is also one of the few, if not the only corridor, with contains some elements for urban orientation like the “Door of the city” (a monument which signalises the entrance to the city), or small places which serve for the traffic distribution.

The inhabitants of this area seem to be well identified to this place. The number of houses for sale is relative low (three from 32) so that it could be thought that the mobility of the population here is more “stable” than the previous area. The inhabitants with the highest income and education level live here. The consolidation level here is also good and the majority of the houses have drinking water. The percentage of rented houses here are rather low and the majority of the houses are well consolidated. More than a half of the houses are *saturated*, less than a quarter are *multi-storey buildings*, and the rest consist of *houses in consolidation*.

A good location and a fast communication to the Metropolis seem to be the factors which retain the population of this area. Nevertheless, in the opinion of the inhabitants, the problems here do not differ much from those of younger and less consolidated areas: public insecurity, a low efficient public service and infrastructure problems related to the lack of maintenance of the existent drainage and drinking water net system.

All in all, and so long as the accessibility of this area is not modified, it can be expected that the functional and socio-economic character of this place remains.



4.3 City Hall Area

The connection between this area and the Metropolis is practically non-existent. Though this area possesses other qualities which give it a special character and a relative good life quality.

This area belongs to the *Old Settlements Area*, occupied around the late 1960s. It has a regular spatial structure, with a clear hierarchy of streets and space left for public facilities.

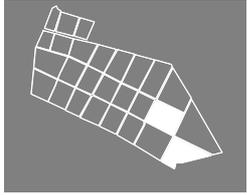
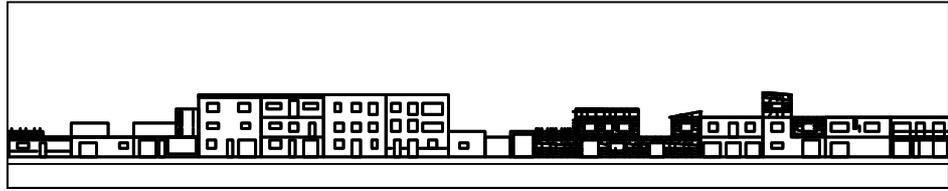
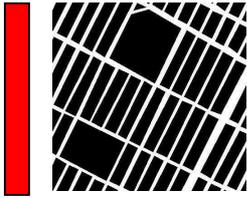
In a city with neither open spaces nor urban landmarks, a *mental map*, may emerge spontaneously, or better said, informally. That may be the case of Ciudad Nezahualcóyotl, having as “center” the City Hall: a building whose location, -though almost peripheral-, has become one of the places with most intensive activity of the city.

Spatially and functionally, this building has influenced without doubt the land use and the consequent social arrangement of the area. Close to the City Hall, banks, furniture stores, restaurants, stores for office material and the like have appeared. Spontaneous centers have appeared not just in front of the City Hall, but also in the back: linear commercial centers which join together the Neighborhoods through an imaginary line. This intensive commercialisation reflects in the morphology of the area: more than a half of the buildings are *saturated* with approximately a quarter of them *multi-storeyed*; the rest is composed of *buildings in process of consolidation* and saturation.

In this area the level of education, income and infrastructure are relatively higher than in other areas. The existence of a predominant commercial land use seems to exclude other land uses as renting; in this area the percentage of rented houses is namely rather low. At the same time, this area seems to be preferred by families which arrive to Nezahualcóyotl, or families who have lived in other neighborhoods before. The reasons for choosing this area as a place of

residence may be multiple, but a very important factor is the existence of the City Hall, which may have the effect of attractor, not just for commercial activity but also as an element of identity.

It could not be taken for granted, that a decentralization of the administrative functions in Ciudad Nezahualcóyotl may be a measure to activate the local economy in other areas of the city and reproduce the same effect in other places. An economical capacity of the inhabitants could be limited and a partition of administrative functions could have no effect in the “mental maps” of the individuals.



4.4 Residential Area

The characteristics of this area seem to be explained by a non-step process, and other factors which were difficult to identify in this work.

The area is located far from the Metropolis and belongs to both the *Oldest* and to the *Young Settlements Areas*. Its spatial structure is neither regular nor the distribution of spaces left for public facilities; these distribute apparently by random and the spatial arrangement of the streets run parallel to the rest of the city, but these streets have no clear hierarchy in comparison to the other areas.

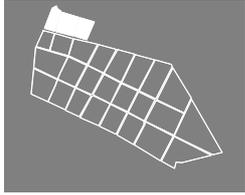
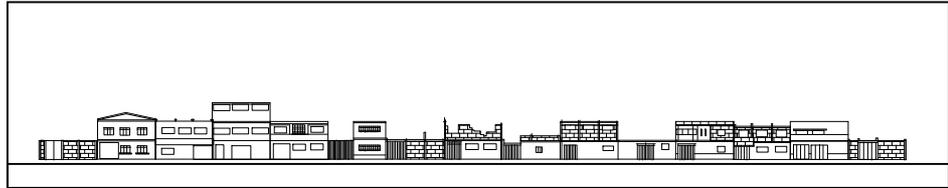
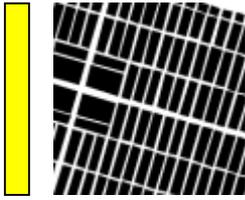
The characteristics of the population and the houses here are comparable to the previous areas. The level of education and income here is high but in comparison to the other areas, the population is younger. Indicators for infrastructure and quality of the housing also are in this area higher than other parts of the city and the percentage of rented houses is low, as is the percentage of immigrants.

Curiously, commerce has not developed here as intensively as in the rest of the city. There is just a commercial strip in the main avenue and the concentration of banks and commerce is not the rule. Commercialisation, in this case, seem to play no role on the consolidation of this area.

The verticalization found here may not be too much explained by the commerce but by an active Real Estate Market consisting of apartments which could be focused to the “local elites” of Ciudad Nezahualcóyotl.

In opposite to other areas, the buildings here at a first glance are not too old, and still the less consolidated houses are not deteriorated nor seem to be stagnated in the middle of the informal building process: more or less a half of the buildings are still *in process of consolidation*, while the rest consist of *saturated* and *multi-storey buildings*.

An hypothesis to the relative high level of consolidation of this area is, that this group of neighbourhoods could be the “center” of younger informal settlements located right to the east of this area, namely the settlement Chimalhuacán, on the hills. If this hypothesis were to be valid, then the prognosis for the further development of this area, as a supplier for younger ones, would be optimistic.



4.5 Peripheral Low Integrated Area

This is the most worrying area of the whole city. This area has a regular spatial structure with well distributed space for public facilities. It was occupied around 1980 but since then the living conditions have not improved much.

This area is particularly isolated from the city of Nezahualc6yotl and from the Metropolis because this area limits with the rest of the lake to the north and it limits to the west with the metropolitan ring, which was built at a topographical altitude over the roofs of the houses. All this conditions have made of this place practically a *cul-de-sac*.

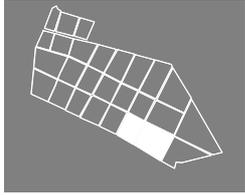
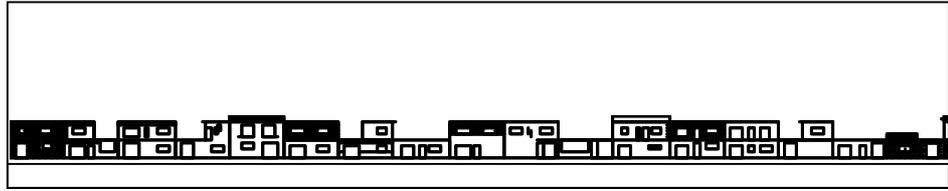
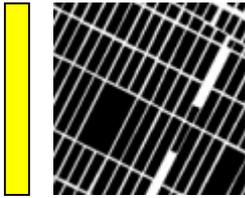
Due to a relative low density, the speed of urban consolidation (drinking water and energy supply, drainage construction) was very slow and the area did not developed commercially, perhaps as a consequence of the same spatial isolation. In absolute terms, the commercialisation increased in twenty years, but in relative terms, the area is the less commercialised of the City of Nezahualc6yotl.

Around the year 2000 half of the houses still did not have drinking water and almost a third of the houses had a roof built with materials different to concrete (the roofs made mostly of steel sheets). Morphologically that reflects in the proportion of *houses in consolidation* (almost three quarters) and the low amount of *saturated houses* (more or less a quarter).

The housing characteristics reflect directly in the population too. Almost a fifth of the population live in “cuartos redondos” or one-room dwelling, which means, that all the persons share just one room for sleep and cook: a predominately young population with the highest percentage of children (more than a third of the population are under than 12 years old).

The previous picture gets worst if taken into account that this is a disaster prone area. A periodical and almost a predictable flooding occur in each rainy season and this is one of the areas which is located more closely to the huge garbage dump of the Metropolis.

The singular problematic of this area had been well known in the 1960s. By that time a restoration of the Texcoco vessel into a lake had been planned and the construction of roads to communicate the area with the surroundings. The plan was not executed due to the lack of funds. The relocation of the population was part of the plan. Today, practically a comprehensive or integral upgrading would be the minimal response in trying to improve the life quality of the inhabitants.



4.6 Central Low Integrated Area

This area is also a young one, occupied around the 1980s. It has a regular spatial structure and the spatial distribution of public facilities is different to the other areas, in size, number and form of space for public facilities.

Due to its relative low density, the urban consolidation, like the previous area, was slow. The social and spatial qualities of this area are mixed but in average the “indicators” for physical consolidation of the houses are predominantly low: in some parts of this area half of the houses have no drinking water into the house and the percentage of “cuartos redondos” or “one room dwelling” reach almost a fifth of the total. The structure of the population is either not homogeneous but it is composed of predominantly young families.

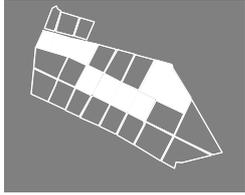
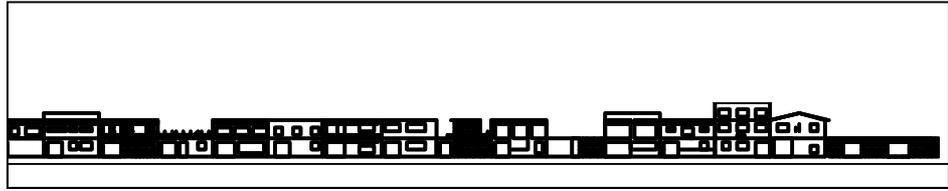
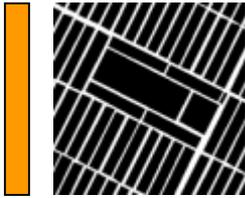
Considering the types of buildings, around three quarters of them are still in process of being consolidated and just a quarter consists of consolidated houses. Multi storey buildings here are seldom and that reflects in the almost absence of commerce. Commercial strips have develop just in a few blocks of the area.

In spite of the low level of consolidation, in opposite to the previous area, this one has several advantages given its location, which could be used to increase the consolidation.

One of the avenues which surrounds the area is the Texcoco Avenue, which defines the administrative limit between Ciudad Nezahualcóyotl and the Federal District. Along this avenue, specialized commerce has developed like auto parts and stores of construction materials. As an intense traffic road, some gas stations have been built on this avenue in the last years too.

Another advantage is that the percentage of rented houses is not as high as in the west, a fact which could be very positive in some upgrading project because the majority of the owners are still living there.

Finally, it must be noted that this area is surrounded by two of the best consolidated areas: namely the *Main Corridor Area* and the *Residential Area*. Until now, no traffic connection exist between all the three areas. If some road were planed to merge the three areas, there would exist at least a possibility that the “consolidation wave” of the neighbouring areas would extent over their limits.



4.7 Normal Area

The area was occupied mostly at the end of the 1960s and it can be considered as an *Old Settlements Area*. The spatial structure is regular and the spaces for public facilities are homogeneously distributed.

The “Normal Area” is the largest of all the areas and, considering its qualities, it probably represents the “average long term process” of a informal settlement in the metropolitan area of Mexico City: if one would like to see how an informal settlement without many external influences changes in fifty years, maybe a look at this area would be the answer.

Thanks to a high density and the fact that the majority of the neighbourhoods were included into the legalization programme initiated in 1973, the urban consolidation process in this area was relatively fast.

In 1970 the whole area was included into the sewage system network of the city and by the same year this area was supplied with energy. Ten years later, the number of paved streets here exceeded by far that of the younger areas.

The group of ages are homogeneous but, numerically, the “Normal area” ranges in the middle values: around 5% of population are 65 and more years (3% and 7% for the *Young* and the *Early Settlements Areas*, respectively) and approximately 30% population are under 12 years old (26% and 33% in the other areas).

Two thirds of the houses have drinking water inside and more than three quarters of the houses have a concrete roof. Approximately one of ten houses is a “cuarto redondo” (in the younger areas the proportion reaches one of five). According to the typology used in this

work, approximately half of the total houses have reached a *saturation* level; just a few of the buildings are *speculative*, and the rest of the buildings, -almost the other half- are *in process of consolidation*.

Functionally, this area locates at the center of the city, but a principle of geometrical centrality seems to play no role in Ciudad Nezahualcóyotl to attract investment. In this area no buildings for administrative purposes was built like the City Hall or similar, and the commercial corridors exist, but not as saturated as in the other areas.

Considering the permanence of urban elements like the City Hall or the relative location of the other areas in regard to the Metropolis, it can be expected that the social and functional features in the “Normal Area” remain.

4.8 Neza out of doors: the end of the beginning

The potential of the method developed in this work is limited to the Ciudad Nezahualcóyotl case study. To research an eventual generalization of the method other settlements should be naturally considered. Each settlement has an own history and very specific local conditions. However, for the method exposed there are some variable conditions which could be considered in further detail.

Natural and topographical conditions influence without doubt the physical form of informal settlements. An informal settlement at a hill or at the coast will develop in form and constructive conditions very different from those developed at a plain terrain or in a city located thousand meters above sea level, for example the city of Mexico.

Another factor is the size and the form of the plot. How large or how small the plot is, will have a direct influence on the possibilities of internal development of the house as well as the proportion of the sizes of the plot.

The age of the settlement will influence also not just the changes in the house but also the land use of the building. Population in young settlement have needs which differ strongly from the needs of population in old settlements. The building thus may become a vertical commercial building, informal renting apartment, or it may remain with a residential use with the corresponding morphological typology.

In conjunction with the factors mentioned above, the location of the settlement into the city and induced planning measures will have also a direct influence on the way and the speed in which a settlement change.

The variations are strong but the probability for a generalization is high. The general trends in which informal settlements develop share similarities not just at a metropolitan scale but also at a regional scale.



4.8.1
Chimalhuacán, México

FIGURES REFERENCES

All the pictures and drawings are based on own information. The basic cartography for the making of the city plans was taken from INEGI: *Sistema para la Consulta de Información Censal 2000 (SCINCE). XII Censo General de Población y Vivienda 2000. México. CD-ROM. 2002.*

