

## THE MORPHOLOGY OF MANAUS DOWNTOWN

Graciete Guerra Da Costa  
Professor Frederico de Holanda  
UNIVERSIDADE DE BRASÍLIA - UnB/ BRASIL  
Departamento de Arquitetura e Urbanismo  
Address: SQS 112 Bloco K apto. 505 Asa Sul Brasília-DF CEP 70375-110  
Telephone: 5561-3469584/ 5561-2452017  
e-mail: gdacosta@terra.com.br

This paper explores spatial Manaus' urban centre features, a city located in the middle of the Brazilian Amazon, lied in the confluence of Negro and Solimões Rivers. Manaus' downtown is considered here the area inserted in the polygon whose boundaries are the Floating Harbour, Álvaro Maia Boulevard, Constantino Nery Avenue to the West, and Major Gabriel and Duque de Caxias Avenues to the East.

Manaus' urban centre is a spatial system whose main feature is a grid like layout, which has been developed according to a vernacular settlement process since the 16th century, when the city was founded by the Portuguese. The movement and the land use here are in a so diverse way that it justifies nowadays its position as the city live centre - defined as the urban area which congregates, in diversity and amount, different urban patterns (including the land use) and the flows (people, cars etc.). Manaus downtown schools, churches, public open spaces, hotels, commercial buildings and also dwellings are to be found. Typologies rang from one-floor to multiple-floor buildings.

In spite of Manaus urban centre being located on a plain along the river, some small hills are identified. High density is another feature, mostly because the permanence of the people living in that area. Buildings tend to be a lot like the Brazilian two-story houses, a colonial type of dwelling, most of them built in the 19th century in this case, two-story, with an only frontal access to exterior - there are no lateral access and blind walls are often usual. There are just a few tall buildings; some of them parking oriented.

An example of convex space identified is Nossa Senhora da Conceição Cathedral Square, where the Relógio Municipal is also located. It is a convex space once it allows people to walk in a straight line in every place inside the square, seeing the entire conceived polygon. Taking into account the convexity techniques, the city open system may be divided into two-dimensional units.

The convexity map allows researchers to check, according to available elements and information about some places, the presence or absence of barriers, it also helps to define the borders of a polygon. With this tool, one may verify transitions among the spaces, and specifically relations between open and closed spaces, whose accesses are controlled by doors or any other element distinguishing the public and the private spheres.

On the other hand, axially techniques give the researchers the possibility of investigating an urban area on a one-dimensional way, by means of the so-called *axial line*. Axial maps are obtained by the insertion, in the open space system, of the fewest numbers of the greatest lines which cross all the convex spaces.

The Manaus' axial map. The most integrated line is Sete de Setembro Avenue, which is also the one with the highest number of connections. It is important to say that it is relevant in this analysis not only the local elements, but also the global ones - usually represented by axis crossing the whole system as a city connector. As it can be seen, analytic categories have both local and global features, helping to understand the city as a unique environment.

A formal space is that strictly tied up with formulas and rules. It tends to be devoted to ceremony, politics, meaning control and power. This category of space obeys a specific hierarchy, and keeping rules running, is important even if they had lost its original meaning. The urban space, secular and democratic, allows the continuous exchange of information and contacts, and also the interchange of the social roles.

The convex space units - segments of streets and squares - are supposed to be able to congregate people. The convex space units also vary in size, the average convex space from one city to another also varies. If we compare the convex space of Escadaria dos Remédios, nearby "Mercado Municipal", with Auxiladora School Square - both so close to each other - we realise they are convex spaces quite distinct. Another possible comparison is among the downtown areas and those close to Ponta Negra Road.

Smaller convex spaces, such as the one located on Igreja dos Remédios Square, have been historically identified by the secular use. On the other hand, bigger convex spaces, as the case of Amazonas Theater Square - where São Sebastião Church is located - are identified by their symbolic use. The same situation - a very symbolic space - is an example of Congresso square (Eduardo Ribeiro Avenue, with a high integration value according to the axial analysis).

The open space system may be, or not, intensely fed by the transitions from internal spaces, where these transitions mean connections among those internal spaces (inside a building) and the public ones. In Manaus' downtown, the vernacular settlement, with a well-constituted grid layout, presents a higher number of entrances and, consequently, the constitutivity average is high. To make a comparison, modern cities, such as Brasília, are extremely economic concerning its entrances.

Considering Manaus' downtown analysis, it is possible to assure that the North areas tend to be more *formal*, whilst the South ones are more *urban*.

## **Integration**

The measure of integration, bodywork of the **Spacial Syntax Theory**, shows the higher or lower integration level among some areas of the center of Manaus, reduced here to the lines of the axially map. The axially map demonstrates the most integrated Avenue is Sete de Setembro Avenue, together with Getúlio Vargas Avenue, and Eduardo Ribeiro Avenue.

It appears as the most integrated one in relation to the district; after that, the latter, Getúlio Vargas Avenue, is the second most integrated. This statement suggests that, the shallower the system, the easier the pedestrian's appropriation, particularly for the strangers to the place.

On the other hand, the deepest systems possess low integration, and, therefore, a more difficult appropriation of the pedestrian. This integration shown in the axially map refers only to the area of

the center of Manaus and tells us about one relative distance from a line in relation to the others of the system.

In a more integrated system, like the center of Manaus, we have to turn a small number of street corners, in average, to go from one street to another. We also say that a system is "segregated" when it is a little integrated; they are small streets without any exit that go through Silva Ramos Street, Ferreira Pena Street and others, in this case the lines of the axiality map are shown in the blue color.

### **Intelligibility**

Sete de Setembro Avenue has an intense crossing to other streets and it is, at the same time, strongly integrated to the downtown area. The more intelligible the system, the more the co-presence is predictable, from the measure of the integration. In the unintelligible systems, the occupation of pedestrians through the axial lines tends to be random, and the process does not contribute to a clear differentiation among the places in terms of co-presence. The downtown of Manaus, by its vernacular system, can be considered well-intelligible; hence, more urban.

In relation to the way of the integrator nucleus, Sete de Setembro Avenue integrates the marrow of the system, together with Getúlio Vargas Avenue, irrigating the system more evenly. In the case of Alvaro Maia Boulevard, also known as Amazonas Boulevard, the integrator nucleus is located in the periphery of the center, exactly bordering other districts of the North of the city.

In very integrated trams, the integrator nucleus tends to leak for all the area, but this is not the case of Manaus, where the integrator nucleus gathers together the marrow of the system, as it was said previously.

The social groups that occur in the interior of the buildings are differently made up by specific people, carrying out their own tasks. The concern here is to analyze not only the use of the land, but what kind of people will use it.

In the center of Manaus there are buildings of Legislative Power and of Judiciary Power (the Executive one was transferred to a more distant area of the center, but it resided to be in Rio Negro palace, being a Cultural Center, nowadays together with schools, business district, churches... It means a variety of activities, a great deal of activities, the relations among those activities, for example, these buildings are attended by the staff of Legislative and the Judiciary Power, beyond the local visitors.

It is also observed, in several places of the center, the temporary housing: they are small and medium-sized hotels. In general, the big hotels are located far from the center of the city, showing, in the area of the center, the churches, the schools, the commerce of Duty-free Zone, the public hospitals and other buildings such as the Public Library, the Amazon Theater and so on.

The variety of activities is very great. There are banks, an intense commerce of manufactured products in Duty-free Zone, there are professional and personal services, restaurants, churches, two harbours, currency exchange service, travel agencies, theaters, cinemas, educational institutions etc.

The Industrial District and its movement in the flow of goods in both directions, (go-and-return, with big and small trucks), also uses the center of the city, a lot including on Saturdays, Sundays and national holidays. The groups of commerce, on workdays, use the built spaces including the social contact with other categories (private transport, automobiles). On weekends, the functioning of the stores and agencies ceases, but these give place to the touristic activities, boat rides, or to the simple visitor that comes to enjoy the landscape and the natural beauty.

Some buildings are visited on workdays and weekends: it is the case of the churches, the Amazon Theater, the museums etc., connected to these squares. Besides the formal commerce, there is the informal commerce, which is smaller, but not less important: they are mobile commerce, stands of native craftwork, snacks and all kinds of goods.

Among the areas that belong our study, there are those more integrated ones, like Sete de Setembro Avenue, which has, all over it, the predominance of stores and very varied activities: public banks, schools, public buildings, libraries etc. In the center of Manaus, the *intelligibility* is high and we also find a high predictability.

The accurate number of pedestrians is very high, mainly in the area that is next to the commerce of Duty-free Zone and the Floating Port, as we said, to the South of the city, due to the central-metropolitan feature of the area.

Some areas do not possess people inhabiting there; in others, even in small numbers, we can see constructions in the area of "Escadaria dos Remédios", which is another port, with regional features: the boats, the barges, the catamarans, leave there and go up Solimões River or go down the Amazon River, to take care of the marginal population of the State, which can move only through the rivers. That has only been mentioned to show how important that area is, not only for the city, but for all the State.

Manaus owns some aspects that will be able to influence the measure of *intelligibility* and also in the predictability, which is related to the correlation between the measure of integration of the axial lines and the presence of people all over the same lines. The level of co-presence may also be affected.

Those previously mentioned aspects are historic-economic ones and as well as the use of the land. As you go through Eduardo Ribeiro Avenue coming from the Floating Port, you pass by the Municipal Clock, the church of N. S. of Conceição, which is a line of bigger co-presence that is not shown in the axial map, going ahead this axial line you will be able to find the main access to the city, passing by the subsequent façade of the Amazon Theater, and the main façade of the Court of Justice of Amazon (the place where there are the oldest buildings of the city) and you get to the Square of Congress, passing in front of the Amazon Educational Institute, that works as a physical barrier of impediment. Therefore, it can be concluded that the co-presence is very influenced by those factors.

Manaus presents a very high level of people in public places, showing a great example of "street culture". A few weeks ago, the city watched the Opera Festival, which was held outdoors, on São Sebastião Square, in front of the Amazon Theater, with international programmes inside and outside the theaters. Manaus still has four theaters downtown.

## **SOCIAL STRUCTURES**

The social structures are made up with a set of general social-economic features, that are always related to the issue of the social logic of the spacial standards and the living space. The **Spacial Syntax Theory** has as its goal to study the social implications of the architectural space. These implications refer to a huge spectrum of the social life.

Manaus, a commercial and industrial center, because the Duty-free Zone has been set up, presents a large number of people dedicated to these commercial activities, most of them are self-employed formal and informal, a small number of civil servants and even a smaller number of high-class people (including here the foreign tourists).

The number of motorised people is low in relation to the city, but the public transport works with a reasonable quality; most of the lines are new and the buses are air-conditioned. The total fleet of vehicles is about 125,500 units, and has 4.000 taxis registered with air-conditioner.

Concerning the relation between workplaces and housing, some inhabitants of the center work next to the place where they live; others, do not.

Manaus also shows the income concentration that we have in Brazil. Before the Duty-free Zone was set up, the farming activities were in the interior, while the commercial and industrial activities were developed in the capital. After 1967, with the beginning of Duty-free Zone, all of those activities, including the farming ones, came to the capital. Because of this, the people of the interior have also come to Manaus searching for new opportunities of job, but the city could not support all of those people.

Another pertinent comment is that most of the industries that have been set up in Manaus, owned their head offices in other Brazilian capitals; the one that better contributed to this flow was São Paulo.

In terms of global evaluation of the city, the people on a low income face a problem of housing. The middle-class, ones have a major problem: the cost of living, which is high for the majority of the people of the place, taking into account that many consumed products depend on the import and the transport from other capitals. The high-class, mainly made up of entrepreneurs, businessmen and foreign tourists, the biggest problem is the distance from Manaus to the other regions of the country, and the climate. Most of those people have come to Manaus to spend, in the maximum, two months, and ended up staying for decades.

Many of that social class, mainly business men, place value on Manaus's security, bringing in their families to settle down there, and considering São Paulo like a "business place". For that class, a great feature of Manaus is the tranquillity.

The best sold electrical appliances in Manaus are refrigerators and air-conditioned devices. A new car always has air-conditioner.

The use of services referable to health is small, there is only Getúlio Vargas University Hospital, Santa Casa de Misericórdia, the Hospital of the Portuguese Beneficence, São José Hospital and the Children's Hospital.

The use of services referable to the education is large, and they are distributed in the center, with the installation of big and traditional schools, like "Instituto de Educação do Amazonas" and the Amazonian School Don Peter II (1869), the Law College (the first university of Brazil, founded on January, 17<sup>th</sup> 1909), the Federal Technical School of Amazonas and many other great colleges. There are no free spaces, empty buildings or abandoned places in this area.

All the spaces of the center are widely used with one or more activities. In relation to the circulation of vehicles, there is a vital flow to the city, that enables a direct accessibility from the floating port to the Industrial District of Manaus, located next to the center, to the seafront of the city. Another flow, inversely, is also noticed, not only to the port, but also to the commerce of Duty-free Zone.

The biggest flow of the pedestrians takes place in the area of Adolpho Lisbon Municipal Market, located in the bank of the Black River; up ahead, in the area of the floating port, and, after that, in the commerce of Duty-free Zone. Other flows of pedestrians are noticed on the sidewalks close to Eduardo Ribeiro and Getúlio Vargas Avenues.

The study of the lifestyle of the people in Manaus helped have an understanding of the use of the space on the squares and other opened places, that helped to identify what kind of city Manaus would fit in.

## **CONCLUSION**

In Manaus, it has, undoubtedly, a predominant *urbanity* in the downtown specific level. Despite the fact that it was small so that the generalizations can be better understood, the high index of the co-presence in the streets and the strong visual identity are undeniable for any standards, and our studies also led us to conclude that Manaus is a dense deep city, where the space functions as mixed mechanism in the same way in the life of the places as in the life of the people.

The intense levels of the co-presence in the streets are more related to the daily life than to the leisure activities in the public spaces, the intense constitutivity of the spaces, a balanced thresh, the high inteligibility, the specific activities in the more integrated lines make Manaus be a city with an endangered lifestyle.