

ARCHITECTURE TOWARDS THE URBAN AGE
Context and Theory

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INTRODUCTION

Context is the battlefield for architecture. The term context refers to the conditions in which something exists or occurs. Within the realm of architecture, the context is compounded by several layers of phenomena that interact and affect each other, such as people, technology and economy, to mention a few. A concrete contextual analysis will give us a clear idea of what are architects and urbanists confronting today. Context is our scenario.

Having this stage set up, I will talk about two architectural offices that in my vision represent two discourses: the theoretical and the contextual. The former will be approached reviewing some notions from NOX, a Dutch office ran by Lars Spuybroek; the latter will be presented through the perspective of the Caracas Urban Think Tank, a Venezuelan interdisciplinary workshop ran by Alfredo Brillembourg and Hubert Klumpner.

This context I mention has such a broad range of possibilities that, for obvious reasons, the theoretical and the contextual are not the only architectural discourses. I see in-between transitions which I will further explain about, and somewhere there my own Case Study at the MAHKU is positioned. Within this essay and in my Case Study, I'm looking at architecture as a result, as a consequence, but especially as a response to a various number of factors that shape cities and their urban agendas.

This essay is an exercise for understanding new architecture, written for non-architects.

BUILDING THE CONTEXT

I will do this analysis from the general to the particular. The first concept that builds the foundation of the context is contemporary globalization, which "remains as the favored term to describe our contemporary world." (Taylor, 2008) For this particular case, what we need to understand of this phenomenon are certain determinant interactions that are shaping cities, therefore architecture. These interactions are called *flows*. "Castells argues that before globalization the dominant spatial form was the space of places-... However, new enabling technologies – the combination of communication and computing industries of the 1970's – have led to a new dominance of *space of flows*." (Taylor, 2008) According to William Mitchell (Mitchell, 2008: 39) there are three basic flows:

1. **Information:** Internet-based daily gadgets such as Blackberries, iPods, Laptops, Mobiles, Tom Toms, etc., are with no doubt, essential tools that connect people to achieve global networking. They are now part of our daily lives. But, more important, the information that flows through these networks travels almost instantaneously. "It is the internet that allows corporations to have truly global strategies since it provides for worldwide simultaneity in social interactions." (Taylor, 2008). Worldwide networking has changed the world at all levels.
2. **People:** "According to Castles and Miller's classic text on international migration, we are living in *The Age of Migration*." (Taylor, 2007) Flows of people have grown over the years. An important part of Globalization is the exchange and mixture of cultures and races, and the positive and negative points that are implicit within these flows, such as diversity, density and economic growth. A key point of migration is that people are constantly moving to cities seeking for better opportunities.

3. **Materials:** The global open market that constantly exchanges goods and services. We are constantly bombarded by mass media that advertises millions of products that we must buy just 'now'.

WORLD CITY

The previously mentioned three types of flows together define what Mitchell calls network connectivity (Mitchell, 2008: 38). "It depends a bit on how you measure, but a recent study by Loughborough University's Globalization and World Cities group plausibly has the top twenty global cities---measured by their level of global network connectivity---"(Table 01, Mitchell, 2008: 38) So, cities are seen now as spaces of flows which attract more people, thus, this is transformed into growth: "Faster growth translates into greater development diversity [at] the scale of the country and within the regions, since it is powered by growth centres, which are mainly urban agglomerations and metropolises." (Taylor, 2008) The important thing to understand a World City is to think of it as a process, rather than a place. (Taylor, 2008)

In third world cases, World Cities have a counterpart. "Today, there are many former "third world" cities that experience both strong world city process and strong mega-city/slum process."(Taylor, 2007) Consequences of the high flows of people who seek opportunities are the slums, thus, *Informal City*(Brillembourg and Klumpner, 2005) growth at a mega scale.

These two types of urban development happen to become the two main currents that define what architects are aiming for in these days. As I said before, we will see architecture as a response to the context: now we know the main context is the World City. But why the city and not the towns or villages? Because 75% of the people will be living in cities by the year 2050. (Burdett & Rode, 2007:8)

The tendency of flows of people is into the city. This is the main issue. Better economy and wellness generate city migration. Important part of contemporary globalization is the mixture of races and nationalities and the urban interaction that comes out of it. World City or Mega City-Slum, the new urban tissue is flexible and in continuous movement. It is a number of dynamic layers that superpose and entangle in a variety of innumerable circumstances and new phenomena.

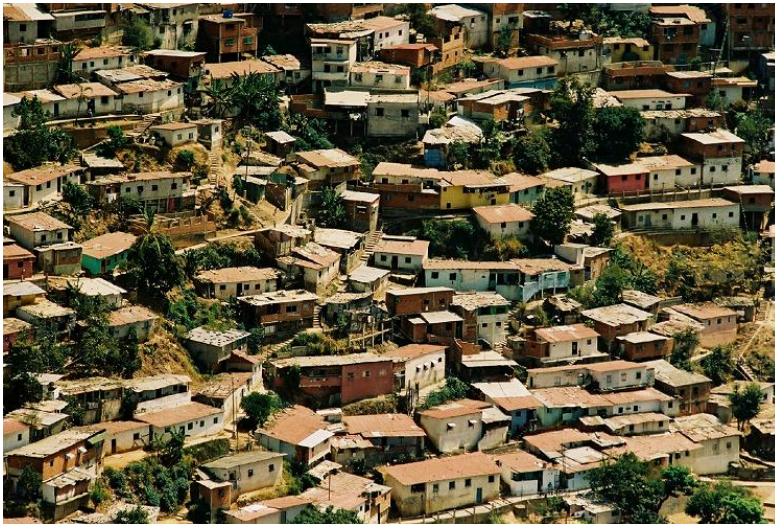
THE PLANNED AND THE UNPLANNED

World City wealth and fast growth rely on many aspects, such as technology and economy. Global networks and media have made possible the quick development of cities. "Castells conceptualizes cities as a continuous network process of spatial interactions with place reduced to the role of node within the networks." (Taylor, 2008) This wealth reflects on the cities populous and new areas: the worldwide attractive zones that are equipped with the infrastructure, equipment and cultural facilities. New architectural design in the planned city is pretty diverse, we could find almost anything. Certain commissions have the goal to sell, to be commercial, like the newest hotels, bars and restaurants; this is totally cosmetic, "cute" as Spuybroek would call it. (Spuybroek, 2008:13). Other commissions are based on the newest technologies, like the new airports. All these types of architecture are product to certain aspects of the context: commercial programs that respond to consumption (material flows) or transportation programs that fulfill the need for flows of people (migration flows), just to mention a few.

The concept of planned city sounds almost utopist, and like all great things created by the human hand, the city brings consequences: good and bad. The un-planned city is the counterpart that emerged, not always welcome, not always recognized; yet, strongly present. The aim is to learn from this un-planned concept, which is self built, politically independent and self sustainable. On the concept of un-planned city, the focus will aim to develop the term *informal*, which is, the medullar starting point for Caracas Urban Think Tank's studies.

History wise, informal settlements were born with the twentieth century: "Today's informal areas emerged a century ago as the modern city was taking form. Rural villagers – dispossessed of their land and livelihoods by colonial land claims or rapacious European capitalism – began to migrate en masse to cities in a desperate search for jobs and housing." (Wright, 2005:79) As different as they may seem, both formal and informal settlements need indeed urban and architectural attention. But the informal and the formal are not just a division for the urban development of a city. Consequently the informal and formal manifest also as socio-economic systems that engine the city. (Altvater, 2005:53)

Urban Think Tank's view of the *barrios* in Venezuela is really interesting; they say we should learn from an informal urban structure that satisfies the living of millions of people without any type of urban infrastructure from the government. They believe urbanists and architects could learn a lot from this self-built mega slum that actually works. Global issues such as poverty, famine, scarcity of resources and Global Warming affect directly on the informal city's dynamics. Urban Think Tank states that we have to exploit the positive existent features and learn from them. They are used to talking to people and really understanding the needs and the possible solutions to a big group of unattended people. "While its projects tend to be small and site-specific, the overall goals are expansive: to explore the connections between diverse urban sites and experiences; to comprehend practices that work, at least reasonably well, in the 'informal' sectors of the city; and, with this knowledge, to develop more successful interventions. Not surprisingly, the group is eager for local and transnational collaboration and exchange with artists, architects, urban theorists, journalists and community activists from the local barrios." (Wright, 2005:79)



Barrio in Caracas, Venezuela.

Formal and informal are not always perfectly divided. In some cases, they blend in organically and overlap within the city's fabric. What happens in the transition between these two urban layouts? World City tendency towards polarization is present, yet, there are in between shades of gray that also need urban and architectural actions. My Case Study, which I will state further on, focuses on these transitions and tensions that emerge in such crucial areas.

ABOUT NOX

Lars Spuybroek's latest publication, *The Architecture of Continuity*, is a book that gathers different essays and conversations that back-up and explain his architecture studio's design research. During his latest lecture at the MAHKU, in Utrecht, the author explained that his work is based on his own aesthetic principles, which are not just formal standards, like in classical or modern architecture, but much more complex, technology-based and computer-assisted design tools. People (and I include myself) often think of the notion of dynamic architecture as a formal result. What the essays explain, and I will also try to explain in this section, is that we have to see

this architecture of movement in a more conceptual, abstract notion in order to understand it as a possibility for today's architecture. "Continuity is not a formal thing; it's everywhere at once; it's an expressionism that runs all the way through." (Spuybroek, 2008:111)

Spuybroek argues that architects from the past were obsessed with objects, like cubes and spheres; and architects nowadays are obsessed with movement, like clouds, flocks, traffic jams, growing of trees and the surface of water. In that sense, architecture must be a result of our movement and other flows that happen during our daily lives, it has to be an extension of the body. "If one did not merge with the car, change one's body into a 12-by-5 foot thing; it would be impossible to park, turn a corner or pass another vehicle. Movement can be fluent only if the skin extends as far as possible over the prosthesis and into the surrounding space, so that every action takes place within the interior of the body, which no longer acts consciously but relies completely on "feeling." (Spuybroek, 2008: 34)

A very important statement that the author makes in the book is the clear distinction between building and architecture. Commonly, we tend to look at these as synonyms, but in the context of this essay, as in Spuybroek's, we will understand them as the following: "We should never mix up architecture and building. Just because our buildings can't move doesn't mean our architecture can't. As our buildings are hard and intransigent, our architecture can be active and liquid." (Spuybroek, 2008:49) It is this "structure of vagueness" in design and thought the idea that creates the architecture of movement, ambiguity and freedom; less defined in its functionality. These notions introduce people into a wider range of behavior and more interaction between each other.

Continuity as an architectural notion is easy to understand when you compare classic and gothic architecture. The classic is all about the architectural elements that assemble harmony in a composition. Every element has its function, in structure and aesthetic, therefore it is not considered continuous. "In the Gothic, everything is a result of the relationships between the ribs – the venation or, as it is officially called, tracery. Many ribs bundle together to become a column; then the bundled ribs split up and start to weave into a vault. That's why there's so much variation in Gothic vault design. The ribs behave in a very textilelike manner; it is a pure art of continuity." (Spuybroek, 2008: 210) Pretty clear if you approach the notion of continuity in this sense, but the real question is: How does Spuybroek apply this notion in a fresh, novel way? What is his interpretation of continuity in theory and how it reflects in practice?

Spuybroek's architectural ideas speak of an inseparable trinity of *mass – structure – texture*. Although it may seem logical that these three are always related, he argues that lots of architects design in a framework that breaks the relationship between the three elements, thus, achieving no continuity in their projects. "If you look at contemporary architecture, you see there has been a significant change in the idea of surface treatment... Dozens of architects work with pattern, or even ornament, which is huge improvement on the postmodern image that only had to be decoded by the consuming mind passing by. But then contemporary architects do not relate it to massing; basically, the pattern is applied to the surface of the volume as if it is an image. Just look at Herzog & de Meuron's work: beautiful surfaces on awful volumes, and you see it with many more architects: the surfaces become patterns of continuity, woven patterns, porous patterns, whatever, glued onto a volume with corners" (Spuybroek, 2008: 217)



Left: NOX, Soft Office, Headquarters for Ragdoll Television, Stratford-upon-Avon (2001), rendering. *Right:* NOX, The Three Graces, Dubai (2008), rendering.

ABOUT URBAN THINK TANK

What does Urban Think Tank do? In their words: "...we established the Caracas Urban Think Tank, a small private research centre and independent practice engaged in architecture, urbanism, and cultural studies. We are committed to fostering a collaborative, multidisciplinary research community that brings together science, art and professionals whose ideas and work will broaden the vision of city administration and encourage them to explore previously ignored and uncharted realms of the Latin American metropolis." (Brillembourg and Klumpner, 2005: 103)

Barrio is the informal topology that UTT has studied and worked. It is very interesting to see how the urban sprawl of the barrios appears chaotic, but if you take a closer look you could see how the self built units work as cells that create the whole system. Each unit is pretty much standard, it has the same materials and the same sizes, which respond to an optimal benefit (e.g. a steel rod size is six meters, so the units are 6 x 6 tops). The *barrio* grows and readapts continuously as a complex network, depending on people's needs and economy. This constant changing condition is one of the greatest lessons from a *barrio*. In reaction to that they came up with the term 'and / and' projects. (Brillembourg and Klumpner, 2005: 20) This means that the *barrio* is flexible and dynamic, constantly changing and evolving; so must UTT's architectural solutions. That is why they work with "city acupuncture". (Brillembourg and Klumpner, 2005:107) rather than a squared, final solution. In addition, that is why they collaborate with interdisciplinary groups and also involve the community in the programs. They go deep into analysis of many disciplines to have a broader view of the context they are working on. They do things directly in the battleground.

"Our interest in 'informal urbanism' has three points of origin: -from a humanitarian standpoint, urban shanty towns are wracked with problems, not least of which are poverty and lack of support from professionals; -from a theoretical standpoint, the 'informal' can serve as a laboratory for the study of adaptation and innovation; -from a design point of view, informality is a condition of complex, non-linear systems in which patterns overlap, intersect, and mutate in unexpected ways. Flexibility is the common ground among these approaches; a model of organic development that challenges the assumption of traditional Western planning that man controls his surroundings... Deliberately or not, the world is moving toward a less formal, more flexible order." (Brillembourg and Klumpner, 2005:43)



UTT, Vertical Gymnasium Project Site. Bello Campo Barrio, Caracas (2003). (before).



UTT, Vertical Gymnasium Project Rendering. Bello Campo Barrio, Caracas (2003). (after).



Left: NOX, Son-D-House. Son en Breugel (2000-2004). *Right:* UTT, "Growing House" (2004), a residential framework of platforms and columns, can be filled in by occupants.

THE MICROSPACE NETWORK CASE STUDY

NOX and UTT indeed present us several notions that may open discussion, therefore worthy of exploration. The purpose of this essay is to gather and combine certain aspects of NOX's theoretical discourse and UTT's contextual discourse and bring a new discourse to the table. In order to make it more tangible, these thoughts and statements were applied to a specific architectural design for a Case Study project located in one of the World Cities mentioned in Table 01: Mexico City.

Mexico City is known for almost reaching the incredible population of 20 million. This is our context, "a continuous grey carpet of low-rise sprawl that extends to the horizon" (Castillo, 2007:183) as urban architect José Castillo describes it. Mexico City's scenario is one of a kind in comparison to the rest of today's Global Cities. Table 02 shows a selection of variables that provide "an overview of the DNA of the Six Urban Age Cities". (Burdett, 2008:246) The variables deliberate different social and economic facets of these cities. Mexico City has various striking statistics, such as a very high working time required to get 1 kg of bread, high crime rate and a huge population. (Burdett, 2008:246)

In addition to this scenario, which is packed with multiple issues, one of the biggest is home owning. Since this is a broad and complicated matter that covers all socio-economic classes and different agendas, I decided to focus on a specific target group I detected as unattained. I gave this group the definition of Young Urban Professionals (YUP). A YUP is a highly educated graduate, male or female, around 25 and 35 years of age who is part of the business and/or intellectual system; usually mid and mid-upper class. They are totally urban; actually, some markets cluster them also as Cosmopolitans. YUPs face the tough pressure of achieving their parent's economic standards in the near future. Unstable economics, security issues and a corrupt Government drive Mexico towards a constant crisis that seems endless. This circumstance has a direct effect on housing mortgages with extremely high down payments that aren't affordable by Young Urban Professionals. If we consider that within the Central Districts the smallest developed apartment is around 60m², we have as a result a very expensive offer, especially for a YUP. YUPs are obliged to throw away their wage renting an overrated flat around the Central Districts. How can a YUP invest on real estate if the down payments for a mortgage are so high? The proposal of this research is to introduce a much smaller living space (25 m²) that presents a different lifestyle which adjusts to our focus target group: I call it the Microspace Network.

GOING MICRO

Going micro responds to various layers related to economic, social and urban issues that build up the project's framework. The first layer is affordability. Making it really small obviously reduces cost, hence, an affordable down payment. The second one is about the Micro Lifestyle. YUPs spend a lot of time in their office; so on weekdays they really just want to have a relaxing bath and a nice plasma with the last TV series or striking news. Within the Microspace Network they also have the possibility of experiencing interaction in the public spaces, which have different atmospheres and characters. Further on I will expand on this in between semi-private, semi-public spaces. The third layer is the zoning. In most cases YUPs have a job located near to the usual or newest business neighborhoods and they usually have a car. "It now takes residents around two hours to make a trip that should take only 30 minutes" (Canclini, 2007:191) and it is obvious that everyone wants to drive the least as possible to their job. "It is estimated that 20 million work hours are lost daily due to congestion generated by more than 3 million vehicles circulating in the metropolitan area". (Canclini, 2007:191) Fourth layer is about making the statement for densifying instead of sprawling. Densifying the Central Districts is a solution that's needed to lower the pace of the sprawling growth in the city's outskirts, considering the fact that the Government cannot keep up with equipment and services for these new periphery areas.

SPACE OF TRANSITIONS

In previous chapters, this essay expands on the concepts of Formal and Informal City. Mexico City, as all World Cities, has the confrontation of both, in some cases it is abrupt, violent; in some cases it is a transition, in which the Formal fades into Informal in a less obvious way. The site for the Microspace Network Case Study is positioned in the latter condition; it is a space of different urban and social transitions even though it is located in one of the city's Central Districts. The first, and most obvious transition is the urban typological, in which you have a residential area, both with houses and up to 15 floor flats, a commercial area and towards where the topography starts to rise, you can see the first self-built settlements of a more Informal mid-low class neighborhood. The site is just in the middle of everything, it acts as a node that struggles with the tension and the transitions of these changing tissues. If we analyze the different housing typologies and put them in opposite sides, there is a huge gap that degrades between these binary opposites. That in-between range is where the Microspace Network Case Study is positioned as a housing typology. Figure 03 shows a schematic transition that already gives some input on how the design starts to achieve its own personality. This partial result is unique in a sense that any other site would have different atmospheres, regulations, limitations and urban character. The project is a multi-layered result of complex urban and theoretic overlapping.

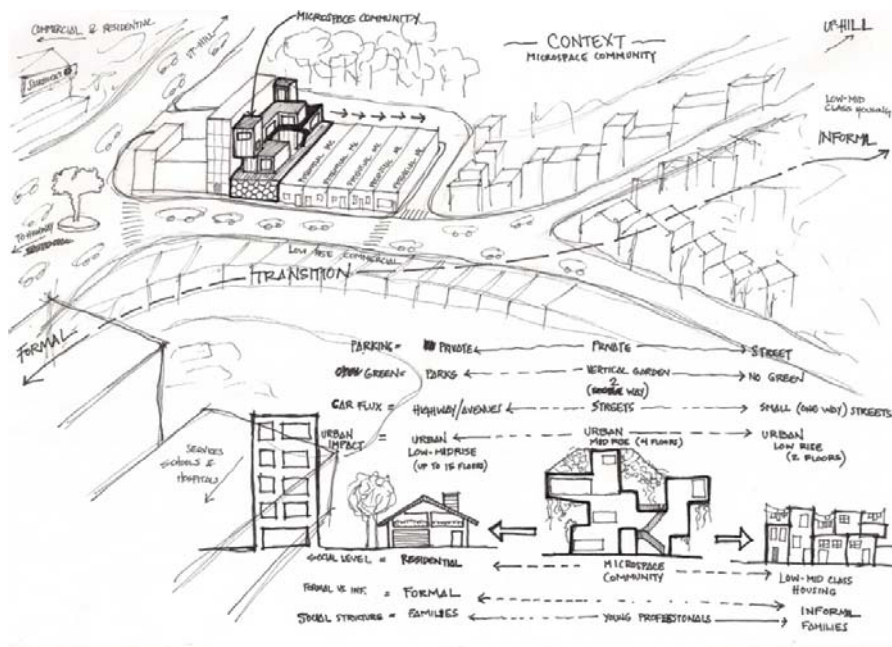


Figure 03. Urban transitions analysis. (Villagómez, 2009)

MICRO ARCHITECTURE AS CONCEPT

Previous micro dwelling studies focus on designing the perfect living space within a minimum cell or container. British architect and Professor Richard Horden explains that there is not a real foundation for micro architecture, and the real example for micro architecture is nature itself. (Horden, 2008:32) I used Horden's principle of learning from nature's foundations; yet, I had to take it a step further, considering that the context of the Microspace Network is extremely urban. Horden had a workshop with his students from TU Munich and developed a lot of micro architecture proposals based on nature's principals and located also in paradisiacal landscapes, which make the experiment astonishingly aesthetic, but not really related to our World City context. The opportunity in this Case Study was to explore these micro principles in a context that brought interesting limitations and new challenges. This condition pushes Microspace Network to a down-to-earth urban exercise that takes the micro to a new level which involves urban, social and economic issues. Taking into account that the project is based on 25m² dwellings that are fully equipped and ready to use, I see these

units as cells that are interconnected to each other with a certain tissue that makes them a part of a whole system. This image came to my mind while studying UTT's analysis of the barrios: "Roads, stairs, and passages through the barrio create networks that bind the whole together, creating an internal logic... knitting a myriad of small, overlapping communities into a large formal city". (Brillembourg and Klumpner, 2005:75) Figure 04 illustrates the transitions of the Microspace by itself, and how it starts to evolve into a more complex system, in which "each building is a component of an inseparable whole". (Brillembourg and Klumpner, 2005:75) Having the system already as a whole, a zoom out of the picture in a "Powers of Ten" (Eames, 1977) mode would no more show this microscopic view of the cells, but a complete body that overall works again as a new node or unit of a bigger scale network. This concept is related to Spuybroek's notion of "mass-structure-texture": (Spuybroek, 2008:217) all the components of the building will then have multiple functions, contrary to the classical or modern statements of architecture, in which every component has a specific function, having then, an unarticulated result in which there is no connection or continuity between this mentioned trinity. The project is not anymore a collection of interconnected cells or boxes; it is now a body, a building that's positioned in a transitional space of multiple flows of architecture, social classes, cars, activities, information, etc.

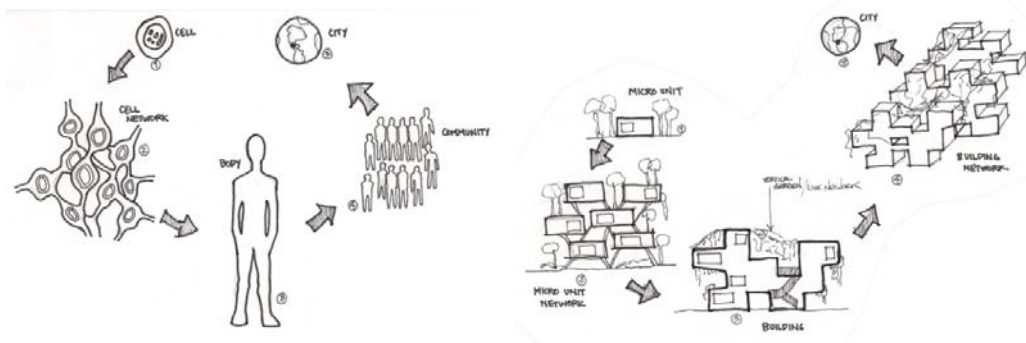


Figure 04. Cell-Body / Unit-Building concept. (Villagómez, 2009)

VECINDAD AS A HOUSING TYPOLOGY

Having already a concept as framework for the Case Study project, the methodology for development was quite unclear. Since the Microspace Network is a gated housing typology that lives toward its interior, I decided to research on an almost extinct and very popular Mexican dwelling typology: the Vecindad. "The word vecindad in Spanish means neighborhood, but the word is also used to describe a dwelling form. The vecindad is usually known as a row of one-room dwellings surrounding an open space or patio." (Rebolledo, I:1998) The medullar part of studying the Vecindad as a housing typology was the relation between space and its users. Rebolledo's definition will give us a pretty clear idea of why is the Vecindad worthy of studying. "The vecindad could be considered as a semi-hermetic world or as a cloistered space where numerous families live as a community... Vecindad represents a relatively tranquil space, sheltered from the chaos and exterior dangers of the city; a space which gives them protection and security and which allows them to live their life in the way they desire." (Rebolledo, II:1998) The Vecindad's description fits perfectly with the distressing security issue that strikes Mexico City's context today; the development of more and more gated communities is a reality that cannot be ignored: crisis, chaos and impunity have left not many options. The main idea of analyzing this housing typology is to take the principal elements, patio, entrance and dwellings and deconstruct them to achieve the Microspace Network concept. The Vecindad is a great example of a community based urban typology that has worked for centuries (since Mesopotamia, although it didn't have that name). Deconstructing its elements and giving them a new character and form considering the concept and the context worked as the

design methodology. It is important to bring out some important differences between Vecindad and Microspace Network. Vecindad is a family based community, while Microspace Network is for Young Urban Professionals which in most cases would be single. Families form a Vecindad would inherit the same dwelling for centuries, while the Microspaces are just a transitory dwelling, in the sense that when a YUP would need to marry and start a family, he would sell the unit to an initiating YUP. Still, the notions of community and networking would be present in the proposal of the Microspace typology.

Figure 05 shows a schematic process of deconstruction of a Vecindad and how the units are pushed, pulled, extruded and sliced to achieve the Microspace Network.

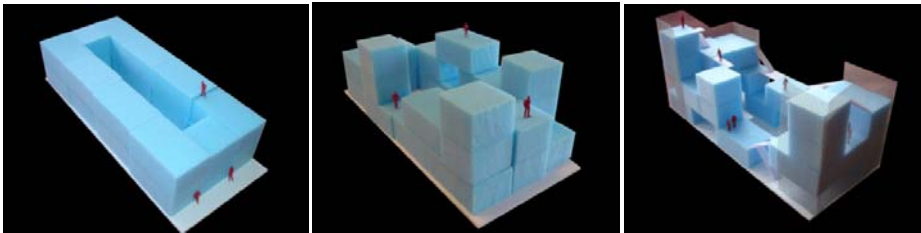


Figure 05. Deconstruction process of a Vecindad into a Microspace Network. (Villagómez, 2009)

SEMI-PRIVATE / SEMI-PUBLIC

The Vecindad's patio is the main design axis for its design. The dwellings arrange around this central public space that has the same character, it is a very clear delimited space. Deconstructing the typology and re arranging the units makes out of the public space a more three dimensional experience that creates voids, shadows, topography, corners, and different rooftops that have multiple functions, such as extensions of the dwellings, public spaces, hallways, bridges and even staircases. The formal idea comes from the stacking self built homes of the barrios in which structures are modular and created with handmade craftsmanship, which is, how Third World construction works still especially in the small scales. Sharing is a very important notion that develops the idea of this deconstructed patio. The roof of one dwelling may be the terrace from another dwelling and at the same time, the connection to other dwellings. These movements for deconstructing the patio are an exploration for achieving different characters within the public space, which is now also a new transition between the private and the public. The dwellings have the option of opening its more public side completely with glass sliding panels, so users can really experience an extension of their property: blurring the boundary between the private and the public. So, at a certain point your dwelling is not 25m² any more, it extends throughout this shared spaces that promote interaction and networking between the inhabitants of the building. Some of Spuybroek's theoretical notions are now reflecting: spatial ambiguity and undefined borders offer choices. This wider range of possibilities makes architecture dynamic via the user. These flows generate continuity, thus, fluid architecture that does not necessarily need complex geometries or curved surfaces. Figure 06 shows a gradated mapping of the transition between the private and the public. It is a shape that breaks with the orthogonal structure from the dwellings and questions the paradigm of spatial property. The average shape of the patio, which is normally rectangular, is now deconstructed into different spaces that are connected but have different traits and personalities.



Figure 06. Ground floor with the gradated mapping of semi-private / semi-public spaces. (Villagómez, 2009)

CONCLUSION

Microspace Network is a project of transitions which seeks balance in the merging of a contextual and a theoretical discourse. I used both as a foundation and knowhow back and forth throughout all of the design process. Analyzing all the layers of the project with these two perspectives is possible. Design, therefore, is not a cosmetic result, based on fashion or a certain aesthetic tendency. It is a multi-layered acupuncture response to a complex variety of rhizomatic multidisciplinary elements that flow together within a specific time and a specific place: context, the battlefield for architecture.

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APPENDIX

Table 01 (Mitchell, 2008:38)
Loughborough University Globalization and World Cities group
Top 20 global cities

1. London
2. New York
3. Hong Kong
4. Paris
5. Tokyo
6. Singapore
7. Chicago
8. Milan
9. Los Angeles
10. Toronto
11. Madrid
12. Amsterdam
13. Sydney
14. Frankfurt
15. Brussels
16. Sao Paulo
17. San Francisco
18. Mexico City
19. Zurich
20. Taipei

Table Q2 (Burdett, 2008:246)

Understanding the city

The relationship between the physical structure of cities and the social and economic lives of their residents is captured by this selection of variables, providing an overview of the DNA of the six Urban Age cities.

	SIZE Population	DENSITY Average density people/hectar	HOUSING Average rent per month in US\$	INCOME GDP per capita in US\$	WEALTH Working time required in minutes to buy 1 kg of bread	TRAVEL Average cost of public transport ticket in US\$	CRIME Murder rate per 100,000 inhabitants	ENERGY kWh per capita per annum	WATER Litres per capita per day	AGE Average age
NEW YORK CITY	7,460,000	9,610	2,500	58,700	19	2.6	4.3	63,000	500	35.8
SHANGHAI	16,610,000	2,890	360	6,900	35	0.5	1.5	5,600	1,800	27.7
LONDON	7,540,000	4,800	2,390	38,400	5	2.7	2.1	20,600	190	26.5
MEXICO CITY	10,900,000	3,700	810	16,400	53	0.2	17.8	1,800	300	29
JOHANNESBURG	3,250,000	1,960	640	5,100	12	1.2	18.9	5,600	380	28.1
BERLIN	3,400,000	3,810	750	29,300	10	2.9	1.4	21,600	160	42.2