

Urban Acupuncture in Relation to Urban Metastasis

C H A P T E R

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Fig.17 Plaça d'Islandia

I. Urban Acupuncture:

The term urban acupuncture is inspired from the Chinese Traditional alternative medicine of acupuncture where punctual and specific pressure points are exerted in the skin releasing the body's energy blockage and enhancing it with a healthy and positive energy. Just like these points are performed on the human skin, the same points are being performed specifically in the city by the urban acupuncture, cleaning and revitalizing it with a new energy and value. It is a strategic, systematic and interdependent process.

Manuel de Solà-Morales writes that *"según la antigua medicina oriental, la acupuntura entiende la piel del cuerpo humano como el principal sistema portador de energía. Los 361 puntos sensibles, distribuidos por la superficie del cuerpo, transmiten, a través de 12 meridianos o vasos, sus impresiones al resto del organismo (exterior o interior). También la piel urbana —la epidermis de la tierra— que estudiaba Jean Tricart— canaliza energía cualitativa. Y, si en la acupuntura se habla de energía 'fría' y 'caliente', también las cualidades en la epidermis urbana son sordas o agudas, mentales o sensoriales. Como en la acupuntura terapéutica, la localización del punto sensible es el primer paso para el tratamiento estratégico de la piel urbana. El acierto en la identificación del lugar y de los canales de influencia en el tejido permitirá aportar una cualidad nueva, añadir la energía adecuada, fría o caliente, potenciar la urbanidad en sus diversos modos"* (Solà-Morales M., 2008: 24).

He claims that for acupuncture experts, the skin is not a cover for the interior but its the organism's principle structure, and the same is the urban fabric for the city. And to act with punctures, pressures and injections is to distribute energy throughout the skin or fabric (2008).



Fig.18 Acupuntura

In Barcelona, some of the first to use this method are Oriol Bohigas, and Manuel de Solà-Morales.

Bohigas in his section of 'Metàstasi i Estratègia' in the book 'Espais i Escultures (1982-1986)', he calls this method as "urbanisme metàstàtic", *"perquè la metàstasi es produeixi d'una manera eficaç i positiva, cal que la «infecció» inicial s'apliqui en els punts neuràlgica i significatius del barri, de la ciutat, de la metròpoli."* He defines metastasis as *"the transfer of a bodily function, pain or disease, originally fairly well-established in one part or organ, to another"* (1987: 11).

Kenneth Frampton connects urban acupuncture with his 'catalytic city'⁸ and he refers to Solà-Mo-

8. What Kenneth Frampton means by "catalytic city" is: *"I will not belabour the argument with further dispiriting accounts of late-modern urbanism, save in so far as it becomes necessary to touch on certain past paradigms in order to give some indication as to what I intend by evoking a potentially effective interplay between global strategy and local intervention and thus, in passing, to focus on the varying implications one might attach to the term the catalytic city. In fact, the Greek word catalysis is highly ambiguous; for while in chemistry it alludes to the presence of an essential inducing substance that in a reaction undergoes no change, in its original sense it meant dissolution and destruction. On the one hand, then, it may be used metaphorically to allude to an intervention whose effects extend beyond its own corporeal boundary; on the other, it implies, by etymological association, the notion of ruination"* (2003: 74).

rales's extensive use of this method, *"the critical designer brings to the spontaneous aggregation of contemporary urban form the possibility of intervening at a single meridian point in such a way as to release tensions and to engender new energy flows within the situation, not only in terms of the specific site but also with regard to future developments emanating from that site in ways which cannot be foreseen"* (2003: 76).

In other words, urban acupuncture means focusing on small, subtle, bottom-up interventions that harness and direct community energy in positive ways to heal urban "diseases" and improve the cityscape. It is meant as an alternative to large, top-down, mega-interventions that typically require heavy investments of municipal funds. These "points" exist in time and space. They operate relationally and reactively, and induce radiating effects with minimal gestures. Thereby, they create networks of characterized energy levels with catalytic and ripple effects on the urban fabric. The location of the sensitive point is the first step in the strategic treatment of the urban skin. Therefore, to identify the sensitive points, *"hay que observar la piel de las ciudades al detalle en sus arrugas y en su aparente inconexión, con la atención del detective que escudriña los menores indicios"* (Solà-Morales M., 2008: 25)

As a matter of fact urban acupuncture is traced to the Finnish architect and social theorist Marco Casagrande who claims that it *"is cross-over architectural manipulation of the collective sensuous intellect of a city. City is viewed as multi-dimensional sensitive energy-organism, a living environment. Urban acupuncture aims into a touch with this nature (...) Every grass penetrating the concrete or asphalt pavement of an industrial city is urban acupuncture (...) It can be applied collectively as networks to deal with a whole city or it can be used punctually in close quarters (...) First you have to determine the sensitive flows of the built human environment. Based on those you have to determine the acupuncture points. The last is to determine what is the needle: architectural reaction"* (Casagrande, 2010).

Jaime Lerner the former mayor of Curitiba, in Brazil, also applied this concept in his city. He says that

the principle of recovering energy from a certain sick or tired point through a simple puncture has to do with the revitalization of that point and the area surrounding it. *"Creo que podemos y debemos aplicar algunas "magias" de la medicina a las ciudades, pues muchas están enfermas, algunas caso en estado terminal (...) Tocar un área de tal modo que pueda ayudar a curar, mejorar, crear reacciones positivas y cadena"* (Lerner, 2003: 5).

The objective of a good acupuncture constitutes of a solid technical base, a greater sensitivity to urban problems and a common sense to plan solutions. It requires creativity to generate new ideas and a synthetic capacity of taking action and transmitting its proposals. A good acupuncture helps in drawing out the people to the street and creating and channeling meeting points.

To Lerner, *"una buena acupuntura urbana puede ser cualquier actuación que produzca efectos positivos en la ciudad, desde nuevos edificios de equipamiento, la restauración de los existentes y los proyectos urbanos singulares hasta las decisiones mediáticas o las nuevas costumbres. La práctica de la acupuntura está orientada a buscar el equilibrio vital de las ciudades, basado en un modelo de ciudad en el que tiene prioridad la equidad, la convivencia y la cohesión social, el desarrollo sostenible, la habitabilidad, la solidaridad, la cultura y la educación urbana, al igual que la compacidad urbana, la conservación y la rehabilitación del patrimonio histórico y popular"* (2006: 136).



Fig.19 Jaime Lerner

Acupuncture is of various types depending from which perspective we are looking from; political, historical, cultural, symbolic, infrastructural, socio-economic...

“Así podemos encontrar en el libro varios tipos de acupuntura. Aquella que hace cosas pequeñas, la acupuntura de no actuar, la del tiempo, la sensorial, la del reciclaje, la de la integración social y funcional, la de la solidaridad urbana, la acupuntura creativa, la de la memoria, la acupuntura del afecto, la del silencio, la del agua, la del diseño, la de la acción, la del orgullo y de la autoestima, la de la ilusión, la del encuentro, la de la identidad, la acupuntura contra la soledad y por último, la del amor” (Lerner, 2006: 137).

The acupuncture system studied in this final project is “Urban” in the form and method of sanitation and hygiene, specifically through small-scale public interventions of squares and gardens.

This kind of punctual intervention as sanitation and hygiene existed and was developed throughout history especially after the industrial revolution and the rise of the epidemics. It existed along with the first urban projects but was disguised in various names and shapes. In the late 19th century and early 20th century it was known as “hygiene” or “sanitation” (higienización, saneamiento) and gradually it took other creative names like urban surgery (cirugía urbana) or “sponging” (esponjamiento) and in the 80s and beyond –especially in the first seven years between 1980 and 1987- it was linked to “metastasis”, “osmotic”, “spots de regeneración” and finally “urban acupuncture”, terms and names that will reappear further in the texts.

Before analyzing small-scale public interventions as urban acupuncture in the city of Barcelona, we need to explore the role played by public space and, more specifically, its most representative example: the square.

II. The Character of Public Space: the Square

Public space is a “gathering place” and a part of a neighborhood, downtown, special district, waterfront, or other area within the public realm that helps promote social interaction and a sense of community. It is characterized by its relation to the other: the essential presence of the “public” is what makes it a public space. It is a space of meaning, a space of use, of coexistence, meetings, emotions, activities, relaxation, recreation, play, etc. It gives shape and meaning to the whole city, ensures elements of continuity and highlights differences between buildings, blocks and urban areas. It is an essential part of daily life, and often becomes a symbol or a landmark that develops the citizens’ social identity. It has an impact on the quality of urban life and is determined by its easy accessibility, the relationship between buildings, facilities, roads, monuments and open spaces, and by the interaction between the individuals and their surroundings regardless of gender, race, ethnicity age or socio-economic level. Public space should also be “responsive” that is, designed and managed to serve the needs of their users.

According to Borja-Muxi (2003), public space is an urban, political and cultural challenge.

1) Urban: It is an ordering and a structuring element of the urban region, an articulator for the city and a construction factor of the neighborhood. It organizes a territory that is capable of supporting different usage and functions.

2) Political: It is a space of community life, of collective expressions, encounters and daily exchanges. It is assimilated to the action of the community and reflects a political will and a proactive image of the institution. It is also a place of affirmation and confrontations, a place for social events and manifestations, *“se ha de ampliar el espacio público hasta el interior de los edificios políticos y administrativos que representan o ejercen poder sobre la gente. Como míni-*

mo, hasta la planta baja" (2003: 69).

3) Cultural: The cultural dimension of public space is "socializar la centralidad de calidad y 'monumentalizar las periferias' descalificadas" (2003: 69). This dimension is not only connected to monumentality or empty spaces but to all buildings, equipments and infrastructures of the city. Value, esthetics, materials, colors, design, and quality are very important factors of this dimension making sure that they suite all tastes and aspirations to prevent exclusions. This dimension was thoroughly applied and taken care of in the modern Barcelona in order to produce spaces of high quality.

Two of most important aspects and basic elements of public urban spaces are the street⁹ and the square. "La ciudad es la calle y la plaza, son los lugares de ciudadanía, que crean y expresan el nivel de ciudadanía, de libertad e igualdad. La calle que nos lleva a los centros, la calle que articula la ciudad, que nos proporciona recorrido y escenario, la calle es función y es paisaje, "no es una carretera". Y es la plaza, lugar relacional por excelencia, ordenador funcional y referente icónico, que puede maximizar la intensidad de la actividad económica y de la vida social. La calle y la plaza donde se expresa la ciudadanía colectivamente" (Borja, 2009: 5).

In principle, streets are "dynamic" spaces with a sense of movement¹⁰, while squares are "static" spaces with less sense of movement. They can also be characterized as either "formal" (enclosed spaces surrounded by formal buildings, orderly floorscape and furniture, and often symmetrical), or "informal" (less enclosed spaces with a more relaxed character, surrounded by a wide variety of architecture and asymmetrical layouts) (Carmona, et al., 2003).

Types and Forms of Squares

One of the most important elements of city design is the square or plaza. The term *square*, *plaza*, *plaza*, *place*, *praça* and *piazza*, originates from the Latin word 'platea' that is used to identify a public space with a special character and morphology distinct

from the channel-like spaces of the streets. By nature they are an urban quality prerequisite and a spatial support for civic institutions dating back to the myths of the Greek agora and Roman forum. During the Middle and Modern Ages, squares were multifunction spaces often bordered by public and private buildings of great importance in the city, the fact that has given it extra importance in comparison with other urban public spaces. "Its hierarchical superiority is evident in any type of fabric, not only due to the functions it supports but also due to the finite nature of its space, its relative size or quality of its architecture regardless of the origins behind its shape" (Dias Coelho, 2007: 19). Nowadays, the square still retains much of its urban role.

The square is a multipurpose meeting space where the traditional city's fundamental social activities take place. Its design has to be resistant, and its center must be open to host a series of multifunctional elements and indispensable street furniture. Its form, importance and identity, no doubt, depend on its location and the facades of its surrounding buildings that add to its value. It is a place for civic, social and leisure activities; a place of rest; a shortcut within the busy street network; and most important it is a place to heal and let the city breath. It is a node of activity, the junction of many paths; it is the centre or the portal of a district, town or city (Lynch, 1960). It is a symbolic space and a location to appreciate the finer points of city embellishment through the public art it may contain, important surrounding buildings, ornaments, fountains, street furniture, materials and design. Squares create more intimate places for seating or dining and provide a space into which commercial and neighborhood activity can spill out. Their use is exclusive for the people, providing their neighborhood with sunlight, hygiene, comfort, benches, terraces, potable fountains, even public art, and children's playgrounds which is one of their main characteristics (Carmona, et al., 2003). Squares are important for community life and according to Alberti "...there ought to be several squares laid out in different parts of the city, some for the exposing of merchandises to sale

9. The words *street*, *strada* and *strasse* derive from the Latin word *sternere* meaning "to pave" and the *str* is referred to constructions and buildings. While *street* suggests a "constituted space" or "a place", the *road*, *rue*, *ruta*, and *rua* come from the Anglo-Saxon root *ride* meaning "passing from one point to the other" and from *via* which is related to the Latin word *ire* meaning "itinerary or route". In Spanish *calle* comes from the Latin *callis* meaning "cattle trail" from which also is derived the word *call* meaning "narrow street between two walls". In Catalan, *carrer* comes from the Vulgar Latin *carreriu* meaning "a place along which cars circulate".

10. The street is a fundamental urban factor; it is a "place" and a route at the same time. Most importantly is that the street is a place to be, to stroll, for people to move on foot or by public and private transportation, to parcel the ground, to collect trash and under which passes the sewers, electrical, water and telephone facilities. It is an access to dwellings, shops, industries and services and a passage to processions and military parades. It defines private and collective domains, allows barricades when revolutions occur, lets the police on horses and tanks move forward to stop the riots and serves as a showcase for the architecture's cultural force. The street is a place to promote the occasion of dialogue and encounter, to plant trees, to place telephone booths and signage, and to provide the buildings with enough light or ventilation (Bohigas, 1985).

in time of peace; and others for the exercises proper for youth; and others for laying up stores in time of war..." (Moughtin, 2003: 87)¹¹.

According to Camillo Sitte, every city has a number of squares where one or a group of related squares, at its center, is the most important and larger than the rest, where the most important and decorative buildings, greatest public art, and decoration are located (Moughtin, et al., 1999).¹²

Public squares are of different types and forms depending on the period they were built, on the circumstances of that time and on the nature of their location and surroundings. In all cases, to be well used they have to be permeable, homogeneous, legible, accessible, comfortable and well decorated spaces. Squares can vary in type:¹³

1) Large-scale squares, located next to historical, governmental, or religious buildings. They are mainly classical and formal in nature, designed for grandeur, specific in their civic function, and decorated with elaborate street furniture, fountains, ornaments, facades, and public art.

2) Market squares, located in the center or in small neighborhoods. They are less formal spaces, mainly of commercial use, with either a modern or a classical design that is most likely to change over time, expressing the fashions of the different periods.

3) Small-scale squares, located in the neighborhoods between residences and dwellings. They are mainly modern and informal in nature, designed as "people places", and decorated with simple street furniture, fountains, facades, and public art (this also depends on their location and the period they were built).

As for the forms of squares, three of the theories were outlined by Paul Zucher, Camillo Sitte and Rob Krier.

Zucher, in his book 'Town and Square' (1959), discussed "artistically relevant" squares which represented "organized" and contained spaces. He distinguished five archetypal forms:

1) The closed square is a self-contained space with complete enclosure interrupted only by the streets leading into it and exhibiting regular geometric forms and repetition of similar buildings or façade-types around the perimeters.

2) The dominated square is a directed space characterized by a building or group of buildings towards which the space is directed and to which all surrounding structures are related. The dominant feature can also be a view or an architecturally developed fountain or work of art.

3) The nuclear square is a space formed around a central feature that is sufficiently powerful to create a sense of space around itself, determining the size of that space, and charging it with a tension that keeps the whole together.

4) The grouped squares are spatial units grouped around a dominant building, or combined to form larger compositions linked together organically or aesthetically by means of an axis.

5) The amorphous square is a space unlimited where often appears to be unorganized and formless, like for example, London's Trafalgar Square (Carmona, et al., 2003), (Moughtin, 2003).

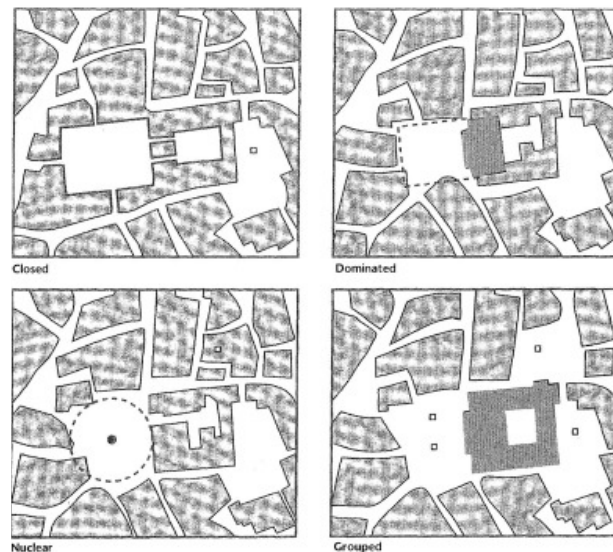


Fig.20 Zucker's typology of urban squares. Note that it is not possible to convey Zucker's amorphous square through a simple sketch.

11. According to Alberti (1986) cited in (Moughtin, 2003).

12. According to Sitte (1901) and Collins and Collins (1986) cited in (Moughtin, et al., 1999).

13. According to Moughtin, et al. (1999) and Moughtin (2003).

Sitte, in his book 'City Planning According to Artistic Principles' (1889), advocated a "picturesque" approach, in a pictorial sense appropriate to the scale of people, and derived a series of artistic principles:

1) Enclosure: He took enclosure as the prerequisite of the square and as the primary feeling of urbanity. He created the so called "turbine" plan that offered closed vistas and provided the view of one street at a time from any point within the square.

2) Freestanding sculptural mass: Sitte rejected the concept of buildings as freestanding sculptural objects and argued that the building's main aesthetic is in the way its façade defines and relates to the space around it.

3) Shape: He believed that unsymmetrical irregular shaped plazas enhanced the identity of a space, stimulating interest and augmenting the picturesque quality of the tableau. He also gave importance to the "deep" square and the "wide" square.

4) Monuments: Sitte's general principle was that the center of the square should be kept free supplying a focus only along the perimeters of the space. (Carmona, et al., 2003).

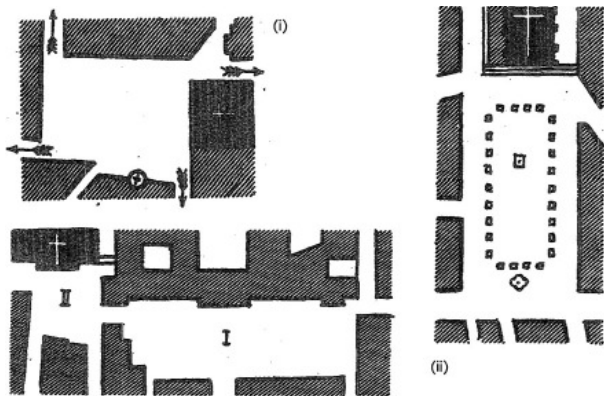


Fig.21 Camillo Sitte's turbine plan (top left). The "deep" type (right). The "wide" type (bottom left).

Rob Krier, in his section 'Typological Elements of the Concept of Urban Space' (1990), discussed another approach to the form and morphology of those public spaces. In contrast to Zucher and Sitte, who concentrated on the aesthetic effect of urban spaces, Krier used elementary geometry as his starting point. His forms of urban squares fall

into 3 main plan shapes: squares, circles or triangles that can be adapted or modified on their own or in combination with the others. They can be "regular" or "irregular", twisted, divided, overlapped, modulated by altering their angles and dimensions, closed by walls or arcades, or they can be open to the environment. These spaces are usually framed by facades that take solid, unrelieved masonry forms; entirely glazed facades; or facades with openings such as windows, doors, arcades, etc. Their shape can also be modified by a variety of sections that substantially alter the quality of space (Carmona, et al., 2003).

Another type or form of square that should be mentioned is the traffic junction space that was born in our car-dependent cities. They are squares in name only and should be designed bearing in mind their primary function: the efficient movement of city traffic, though depending on their design they can bring meaning to those spaces and make them less hostile. One example of these spaces is the New York's Times Square. They are spaces divided by roads but yet connect one side of the street or sidewalk to the other. In order for these spaces to function well, noise and pollution should be controlled and traffic volume should be managed and reduced (Moughtin, 2003).

As a matter of fact, squares rarely represent one pure type and often bear the characteristic of two or more form, and the specific function of a square does not necessarily produce a definite spatial form but each function can be expressed in many different shapes. (Carmona et al. 2003).

III. Urban Acupuncture and Small-scale interventions

This part will be covering the general concept of urban acupuncture - hygiene - square relationship, and its effects and advantages during the first seven years of the 80s till our present day. It is a more detailed derivation of the Barcelona model stressing more on those small-scale interventions as punctual operations of acupuncture.

The remodeling of many of the public spaces that already existed in the city, along with the creation of new spaces has been a central theme in the transformation of Barcelona. With the democracy and the PGM plan *“la reserva del suelo para espacios verdes y equipamiento (...) fue, en cambio, junto con el esfuerzo técnico y político de la primera administración municipal democrática reinstaurada, el punto de partida de la “reconstrucción de la ciudad” de los años ochenta”* (Font, 2000: 76). Interventions were made in some selected squares as “sectors of rehabilitation stimulus”, with the pretention to “affect” the surrounding urban space. A total of 150 operations of public space recuperation were carried out. (Capel, 2005). *“La voluntad de resolver los problemas de la ciudad heredada y la utilización del Plan vigente como instrumento se traduce en dirigir el presupuesto municipal de inversiones de urbanismo a la compra masiva de suelo para zonas verdes y equipamiento, en una etapa de escasa dinámica urbana. Este será el punto de partida para la operación dirigida después por Bohigas. Una etapa en la que se conjuga hábilmente la oportunidad de la intervención con la adopción del “proyecto urbano” como instrumento eficaz y operativo frente a las rigideces e incertidumbres de los planes de ordenación”* (Font, 2000: 76)

In ‘Regenerating Barcelona with parks and plazas’, Peter Buchanan writes that *“tackling the problems of Barcelona Bohigas has not restored to the abstractions of planning. Instead he has made possible and guided concrete interventions of sufficient flair and character to shape the life of citizens in the same direct and*

benevolent way as did the imaginative gestures of the past” (1984: 33) He adds that Bohigas decided to initiate a series of projects arising from a detailed study of each area, instead of preparing a new master plan. Instead of working from the general to the particular, from master plan to local project, he inverted this normal procedure.

In his turn, Bohigas states that *“se trata, pues, de hacer un urbanismo con los instrumentos de obra pública, es decir, un urbanismo que se apoye en los proyectos de urbanización. Proyectar, una vez más –y realizar-, plazas, calles, paseos, parques, ramblas, encrucijadas, pasos de peatones, mobiliario urbano, señalización, monumentos.”*(1986: 19). He adds that Ignasi de Solà-Morales, in his book dedicated to the 1929 Exposition, *“bastia tota una teoria general sobre l’eficàcia de les realitzacions puntuals –tant a petita com a gran escala-, si són escollides adequadament segons tàctiques immediates o estratègies a terme mitjà”* (1987: 11). To Bohigas, sanitation and hygiene are not effected by population density but by providing space. He disagrees with one of the most passionate discussions that stresses on the need to reduce population density, in old neighborhoods, as an essential step for sanitation and hygiene purposes and rehabilitation itself. To him it has proved to be useless because these neighborhoods are being depopulated by themselves and will soon reach very low densities and this did not make them more habitable nor improved their hygiene conditions and accessibility. *“El derribo de los almacenes industriales de la calle dels Angels, en Barcelona, ha aclarado este aspecto: no ha habido cambio de densidad, sino el traspaso de un espacio privatizado a un espacio público (...) la forma de vida del barrio ha cambiado sustancialmente porque se ha ampliado la capacidad de uso colectivo”* (1986: 30).

In other words, to make sanitary changes, population density (except in extreme cases) is not as important as the density of land use or *“la densidad de*

ocupación del suelo" (Bohigas, 1986).

Kenneth Frampton, referring again to his colleague Manuel de Solà-Morales, says that *"by this term he intends a similar strategy of making catalytic, small-scale interventions, with the condition that they should be realizable within a relatively short period of time, and capable of achieving a maximum impact with regard to the immediate surrounding"* (1999).

The key was to construct many small projects with the purpose of not designing a new model but of fixing it (Acebillo, 1999). New constructions and everlasting expansions and developments had to be replaced by building *"where it is already built-up, improve, transform, modify, rehabilitate and give new meanings to existing buildings, while reinforcing or creating a sense of identity. It is a matter, therefore, of a strategic, reconstruction planning by metastasization, based in the main on the organization of public space because it is the most immediately effective method of pursuing these aims"* (Bohigas, 1987: 12).

"La creación de espacio libre y la atribución de un significado a este espacio son los dos factores decisivos para la reconstrucción de un barrio viejo. Esta es la política urgente de cambio, porque con ella se consiguen tres objetivos muy claros: el esponjamiento e higienización sin destruir la estructura esencial del barrio, una mayor aglutinación social del sector afectado mediante los procesos de significación y monumentalización, y la generación de transformaciones sucesivas a partir del foco constituido por el nuevo espacio libre" (Bohigas, 1986: 40).

Still, in some cases, the demolition process could not be avoided. The degradation in Barcelona's old neighborhoods had reached high levels to the extent that many houses had to be demolished because they cannot be rehabilitated nor restored to their original state. Therefore, *"hay que tener incluso la valentía de derribar una arquitectura relativamente respetable si imposibilita una acción de regeneración más importante y urbanísticamente indispensable. Conviene insistir en este último aspecto: es absurdo exigir el mantenimiento de la casa donde pernoctó Picasso si la decisión comporta que no se abra la plaza de la Mercè"*

(...) es igualmente equivocado invocar la continuidad morfológica de la calle de Joaquim Costa para evitar el jardín de Emili Vendrell, tan eficaz en un proceso de rehabilitación..." (Bohigas, 1986: 30).

As a matter of fact, this has been one of the most effective and positive advances in urban planning method made in Barcelona. *"The effect of positive 'metastasis' through regeneration of the urban fabric by means of 'small-scale' operations for improvement spread around the city"* (Esteban, 2004: 123).

And the reason for that is:

1) It should be accurate and specific: *"To start a series of specific developments that could act as focuses to regenerate the surrounding area in the conviction that this practical activity often has more immediate and radical results that would be obtained in consequence of exclusively using systematic large-scale planning (...) For metastasis to be effective and positive, the initial 'infection' must be injected at the nerve centers and most important points in the district, city or metropolis. To some extent one could say that a good Master Plan is one that identifies accurately the position of all these nerve centers as well as the proper moment for action on each of them"* (Bohigas, 1987: 11).

2) It causes a "catalytic" effect: This criterion of "osmotic" or "spots de regeneración" (names also given by Bohigas) is very efficient and positive since, for example, creating a square in the historic center has a direct effect on the inhabitants and their surroundings. The shops that had an almost inaccessible and narrow street facade now are facing a new square and a surplus whose returns are being reverted back to the inhabitants themselves. *"De esta manera, una revalorización del espacio público provoca la mejora de todo su entorno, no solo de las tiendas sino también de todos los ámbitos de la propiedad privada. Y además ayuda a mantener en el barrio a una buena parte de la población autóctona"* (Bohigas, 1999: 204).

3) It helped resolving problems of "mega-interventions": This "acupuntura urbanística" allows handling many obstacles that would occur in ma-

for interventions. However, to commence an urban transformation through the improvement of public spaces, there should always be a strategy that creates an agreement between the plan and the project. For this reason, starting the transformation through small-scale spaces was necessary and had many advantages because they could better solve all the possible unexpected problems that could arise, *“las incógnitas que se podían plantear –como costos, mecanismos de participación, no hipotecar acciones urbanísticas de futuro, etc.- se resolvían mejor desde la pequeña escala”* (Acebillo, 1999: 225).

4) It had further advantages: Investing in public spaces had a widespread benefit, first because of the easy management and development of the punctual actions themselves and second because it allowed the subsequent economical participation of the private sector with which solidarity and social rehabilitation are achieved, and furthermore, citizen participation was made possible, letting the people decide and collaborate with the architects (Acebillo, 1999).

These projects were applied in the peripheries as well as in the historic centers of Barcelona, *“la higienización de todo el ambiente con una corrección radical del espacio público y de la densidad edificatoria, una rehabilitación a fondo del parque residencial, una reeducación social personalizada y una política de nuevos equipamientos y servicios.”*(Bohigas, 1999: 204). *“La necesidad de llevar a cabo ‘reparaciones urbanísticas’ era general y en todos los barrios”* (Acebillo, 1999: 225).

With regard to squares, punctual voids played a positive role in maintaining the essential formal structures of neighborhoods and enhanced their character. Barcelona’s open spaces and squares are not defined by their geometrical forms and dominating architecture that corresponds to the Baroque models of Paris, such as Place des Vosges, except for Plaça Reial, Plaça Sant Jaume, Plaça Sant Josep, Plaça del Mercadal de Sant Andreu, Plaça Sant Miguel del Port and Portal del Mar that tend to correspond to these models with their uniform architectural facades (Bohigas, 1986).

Due to that, many have complained that the city lacks good squares and Bohigas responded to that by *“olvidan que, con las excepciones citadas, Barcelona responde a otro tipo de plazas: las de los Campi venezianos, del Graben de Viena, de la Piazza delle Erbe de Verona. Y si no fuera porque la distancia en calidad de excesiva, diríamos también que responde al de muchas plazas romanas como la Navona –donde la forma es consecuencia de una huella arqueológica unida a una reinterpretación contradictoria y atrevida, pero adecuada a la continuidad de la trama urbana- o la serie de espacios que rodean Santa María supra Minerva o la plaza de San Bernardo, con una arquitectura que emerge aparentemente insolidaria pero fruto de un proceso armónico de vaciado y remendado”* (1986: 40). They are also squares of historical overlappings mainly of medieval roots where the space does not rely only on the vertical planes but on the autonomy of every architectural piece, land modulation and the picturesque quality of the different views and itineraries they provide, such as in, Plaça del Pi, the reinvented Plaça Sant Felip Neri, Plaça del Rei, the spaces around Sant Pere, the Plaça Nova and Plaça Berenguer el Gran. They are all spaces where the history, artistic, physical and social relations are more important than the constraints of an ideal order reduced to vertical architectural plans. Bohigas adds that they are the models according to which free spaces –in the historic neighborhoods of Barcelona- were reconstructed and proposed in the interior reform plans of Raval, Santa Catrina, Sant Pere, Barceloneta, Hostafrancs and Gràcia. *“Son unos modelos que admiten un método muy tradicional: derribar una manzana de casas y formalizar y significar el nuevo espacio libre sin dar importancia presidencial a las viejas fachadas asomadas a la calle, sino calificando la tipografía, el pavimento, la jardinería, el mobiliario, el monumento. La reconstrucción de los barrios viejos en sus aspectos morfológicos no solamente es un problema de edificación; la calidad se encuentra directamente definida por el espacio casual reconsiderado monumentalmente con la definición de la cota cero y de lo que emerge de ella”* (1986: 40).

The form, use and function of these spaces transformed neighborhoods in a natural and acupunctural way without damaging their morphological and social structure. Their actions were direct and indirect by providing sanitation solutions and promoting collective responsibility and civility.

With all the problems caused during the Industrial Period and later with the civil war, the dictatorship, the “porciolismo” and the urban growth of the 60s and 70s, Barcelona was trying to recuperate and regenerate its lost urban public spaces using the 92 Olympic Games as a catalyst (as discussed in the “Barcelona Model”).

The Urban Project Service or ‘Servicio de Proyectos Urbanos,’ formed in 1981, applied the necessary actions to articulate the deteriorated and disaggregated city through recovering and developing public spaces especially in the peripheries that were nothing but an accumulation of neighborhoods. These new and numerous interventions had to comply with and reach certain new standards they did not acquire before. Thus, many solutions were achieved through the creation of squares and parks.

There was also interventions of gardens but *“mientras que la plaza (...) encontrara muchas ocasiones para materializarse en Barcelona, el jardín, en el sentido más estricto del término, se concretaba en muy pocas realizaciones. La mayor parte de intervenciones que podrían relacionarse con él se acercan más a aquella tipología intermedia entre el jardín y el parque urbano que al jardín propiamente dicho”* (Farrando, 1993: 90).

In a short time Barcelona was provided with a large network of squares. Due to their small-scale they were able to become a reality in a short time. On the other hand, parks took much longer time because of their large or intermediate scale. Due to that, for a certain period of time, only public spaces with a strictly civic content seemed to be carried out. They were known as “hard squares” or “plazas duras”, and in the beginning, *“aquest nom no era pas inadequate, perquè cal tenir en compte que, en la majoria dels casos, era bàsicament un exercici de pavimentació”* (Acebillo, 1993: 107). Consequently, people started claiming for spaces where greenery

played a more important role. With time, this situation changed slowly and while the progressive conversion of park projects were taking place, a new kind of space emerged –that no longer subscribes to any of the two (the square and the park)- known as the “square garden” or “plaza jardín”; a space that combines both. *“Poco a poco, surgen en Barcelona plazas donde el elemento vegetal, anteriormente circunscrito a los parques, adquiere un papel más importante”* (Farrando, 1993: 94). The dichotomy “square garden” gave way to areas of great ambiguity, nevertheless, it did not replace any of the “squares” or “parks” but it complemented them.



Fig.22 Plaça de los Països Catalans one of the first “hard squares” in Barcelona (top). Jardins de la Indústria is one of the “garden squares” in Barcelona.

1. Center-Periphery

The relationship between the center and the periphery is a basic discussion in all the cities that witnessed a second wave of expansion. The city itself is normally acknowledged through its historic center by the name of its center, its identity, monuments, collective integration and high-quality urban spaces full of emblematic elements and identifiable spaces. In spite of that, most of the historic centers in European cities, as in Barcelona, suffer from degradation (Bohigas, 1999).

The PGM was not sufficient for these kinds of projects and for the quick recovery of the historic centers and peripheries, thus very special projects were drafted and planned:

Special Plans for Interior Reform

The critical attitude towards the mid 60s planning, the irregular housing projects and the first attempts of abusive planning like 'La Ribera' plan in 1971, led to demands for new urban planning (Font, 2000).

Since the planning contained in the PGM is general and did not exhaust the city's projects nor cover specific and limited areas, new types of projects appeared such as special plans for interior reforms or 'Plans Especials de Reforma Interior' known as the PERI. *"The period in which the PERIs were most important in municipal policy, especially in the process of drawing up projects and in public debate, was between 1980 and 1986"* (Esteban, 2004: 119).

Under the pressure of the 'asociaciones de vecinos' these plans were elaborated in historic neighborhoods of the city such as, el Raval, Santa Catalina, Barceloneta, Gràcia, Sants, and in the periphery such as Sant Andreu, Torre Baró, Vallbona, etc. (Font, 2000).

Each PERI had alternately one or another intention depending on whether they deal, for example, with

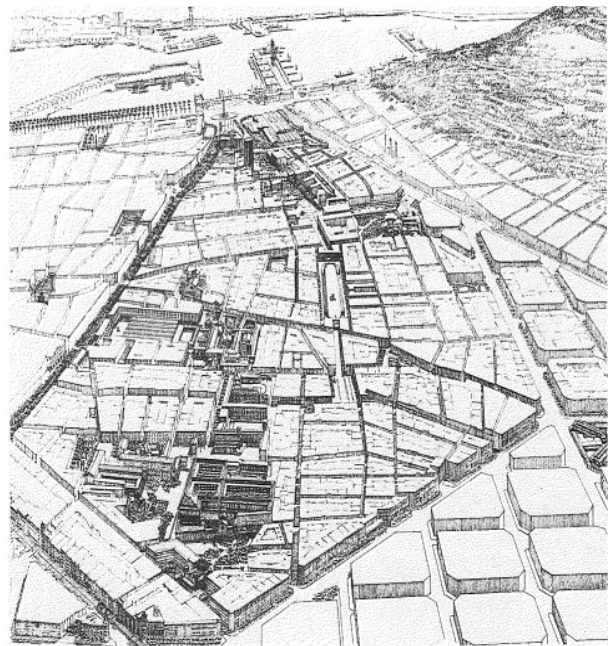


Fig.23 "From the Liceu to the Seminary" in the Raval neighborhood.

Raval area in the old town or Vallbona in the periphery. They perform specific planning and improvement actions in the urban fabric with the creation of new roads, squares, parks and public facilities that were part of the City Council's objectives. These projects were easily developed with the help of the PERIs more than with the PGM. They were short-term, small-scale instruments of real planning that translated the uniform decisions of the long-term, large-scale PGM to the specific conditions of each area and the uniqueness of each neighborhood. They were the means through which neighborhoods could oppose the PGM and attain their demands especially for green areas, public facilities and the conservation of spaces not considered by the PGM. They were closer to the citizens and the general public and they have always been means to show specific planning objectives in the spaces concerned, whether to assess, implement or change them (Esteban, 2004).

Each PERI proposal has been varied depending on the conditions of each area, the feasibility of the project and the resources employed in each. The

enrichment of planning and the improvement in the viability of these proposals represents an undeniable advance in the city's overall project. Some of them were executed, some will be executed and some were reconsidered. We should not forget that their implementation, especially those that affect the urban fabric, frequently require time and successive planning attempts (Esteban, 2004). Font claims that in Ciutat Vella, there were three remarkable PERI proposals that had represented a significant effort in the construction of new

dwellings (1.700) and the rehabilitation of existing buildings (around 400) which amounts to about 15.000 housings and premises, that is, a total of 20% of the existing buildings in the district. He adds, "pero, sobre todo, las operaciones de vaciado y esponjamiento de los tejidos históricos y la reurbanización del espacio público de calles, plazas y jardines, junto con la rehabilitación de las fachadas, han sido las acciones positivas más visibles, acompañadas de una creciente museificación y terciarización, no siempre compatible con el carácter residencial popular prioritario que quería mantenerse" (2000: 77).

PERI	Documents		
	Plans and projects	Plans up to 1992	The second renewal
<i>Ciutat Vella</i>			
• Raval	•	•	
• Sector Oriental	•	•	
• Barceloneta	•	•	
Plans for the Passeig de la Zona Franca	•	•	
<i>Traditional neighbourhoods</i>			
• Gràcia			
- First, more ambitious version	•		
- Second, version of action units	•		
• Sants Hostafrancs	•	•	
• El Vapor Vell		•	
• Poble Sec		•	
• Sant Andreu (studies not approved)		•	
• Horta		•	
• Prosperitat		•	
Plans for the Carmel	•	•	
<i>Self-construction neighbourhoods</i>			
• Torre Baró	•		
• Vallbona		•	
• Roquetes		•	
• Can Caralleu		•	
• San Genís		•	
<i>Latest neighbourhood plans</i>			
• Porta			•
• La Clota			•
• Trinitat Vella			•

Fig.24 Table of the different PERIs.

2. "Higienizar los centros"

Ciutat Vella

After the Industrial Period, the civil war and Franco's dictatorship, Barcelona's historic center, Ciutat Vella, was physically and demographically degraded. The services were scarce and the dwellings were very old with weak structures. Many buildings in the historical center were left empty, and a series of cycles began with an alternating abandonment of old residents and arrival of new residents. Every cycle meant further impoverishment for the overall area, and unstable social conditions caused by the new inhabitants. A big part of the population lived in unbalanced, precarious conditions. Young people abandoned the neighborhood leaving it for much older people with economic incapacities; for an abusive presence of tourism; and for an exceeding low-quality tertiary offer all causing irresponsibility, loss of identity and an increased marginalization, delinquency and insecurity. The neighborhood turned into a "barrio 'irreal': mucha gente lo 'usaba' y poca gente vivía en él" (Bohigas, 1999: 203).

In most of the European cities, changes were radical since the population of many central neighborhoods were expelled and exiled to the new peripheral areas for the sake of urban regeneration leaving the newly rehabilitated center for new social groups of high economic level but with the same problems. This high but essential economic scale provoked social conflicts because it drained the life out of the historic centers. In Barcelona a less radical method was applied by constructing new equipments, demolishing some unhealthy dwellings, building new houses and rehabilitating those that ought to be due to their urban meaning or their easy adaptability, thus, maintaining equilibrium between the city's old tenants and the new social groups who were attracted by this revitalization (Bohigas, 1999).

For this reason, one of the first solutions was the PERI that was drafted and planned for three of the

Ciutat Vella's four districts (El Raval, Barceloneta and Santa Caterina). These Plans anticipated a volume of action for the coming decades that would provide Ciutat Vella with the dwellings, facilities, services and infrastructure it needed, and most important to equip it with the public spaces it lacked improving by that its residents' quality of life.

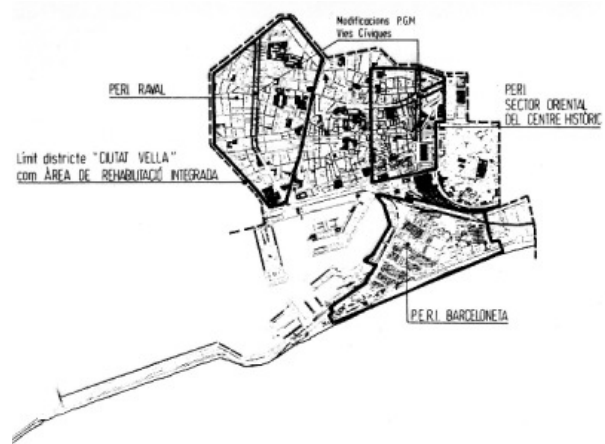


Fig.25 PERIs of Ciuta Vella.

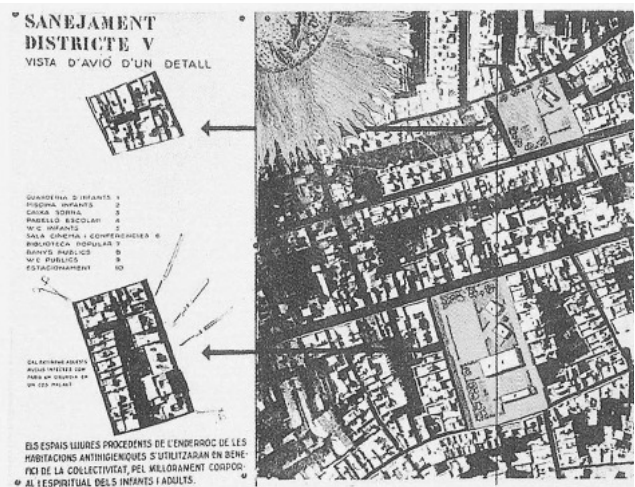
Urban Acupuncture in the historic city was applied in rearranging and creating public spaces based on the criteria of opening up more spaces in the high physical density of Ciutat Vella, reducing the degradation in its urban fabric and permitting its renovation. Creating squares was either by demolishing old, unhealthy buildings like in Rambla del Raval, Plaça George Orwell, Plaça de la Mercè, Jardíns d'Emili Vendrell, Pou de la Figuera, or by demolishing old industrial warehouses like in Carrer dels Angels, or replacing cemeteries such as Fossar de Les Moreres. "La higienización a través de la creación de espacios, ampliando los existentes, reagrupándolos o creando otros nuevos, con el derribo de las áreas en peores condiciones, es la contrapropuesta

de la posible higienización promovida por la abertura de nuevas vías. La primera contrapropuesta que se planteó en Barcelona en este sentido fue precisamente la del GATCPAC en el Plan Maciá” (Bohigas, 1986: 40). The GATCPAC were the first to apply the system of sanitation through creating open urban spaces and not fragmenting the city with new roads. They applied the method of urban acupuncture –referring to it as “cirugía urbana”– by replacing the infected buildings with open spaces and squares. Through the Plan Maciá, the GATCPAC provided solutions not only for Ciutat Vella but also for the Eixample and the peripheries¹⁴ (GATCPAC, 1934).



Fig.26 The GATCPAC project established the rationalisation of Ciutat Vella as a basic priority. GATCPAC’s plan for Ciutat Vella.

In his turn, Busquets adds to that “la idea d’esponjament creixent és una tònica comuna dels tres Plans (PERI), si bé amb formes de projecte diferents. L’esponjament, com a tècnica per refer l’estructura geomètrica de la Barceloneta, passa per reubicar-ne l’agrupament central. L’enderroc d’una o de diverses il·les senceres és un recurs del projecte ben emprat als sectors de la Ribera i del Raval. Barcelona en té excel·lents exemples de bon resultat: la plaça produïda com un buit en el teixit ha estat un fet comprovat de nou a la plaça de la Mercè, i es palesa com una de les tècniques més reeixides” (1986: 54).



In Ciutat Vella, the creation of squares and green zones was very peculiar since, the complex structure of network has led to a patchwork of green spaces and public squares intertwined between streets with a high pedestrian component. This urban complexity and diversity, with the reinforcement of pedestrian streets, resulted in an increase in multi-functional public spaces especially in cultural and commercial areas (Busquets, 2005).

In 1986, Ciutat Vella became an ‘Integrated Rehabilitation Area’ (ARI), as part of the ‘Integrated Actions Program’ (PAI), in order to obtain the necessary financing from the Spanish and the Catalan Governments. In 1988 the City Council created a mixed municipal company ‘Promoció de Ciutat

Vella, SA' (PROCIVECA), to promote and manage the district's transformation and revitalization, and in 2002 the City Council opted to maintain the same model and created 'Foment de Ciutat Vella, SA'. The process of transformation and revitalization allowed the creation of new public areas and the construction of homes and facilities on previously freed up land. This led to the generation of: Some 110,000m² of occupied land have been transformed into public space (64,355 m²), facilities (16,322 m²) and housing (25,371 m²). From the 64,355 m², 25,000 m² were dedicated for new

public spaces. They created approximately 40 new squares and renewed 29 others restoring to the district and its inhabitants sufficient amount of open spaces to develop their necessary civic activities.¹⁵ Between 1988 and 2000 private and corporate sectors invested in Ciutat Vella, including Barceloneta, around 9,000 million euros, 50% on facilities and infrastructure and 25% on public spaces and the same on dwellings. The Raval received 60% from the total amount and the housing demolition process started and made way for the Rambla del Raval(2000) (Busquets, 2005).



Fig.27 Ciutat Vella's open spaces in 2000.

15. Foment Ciutat Vella [online]. [Accessed: 25 October 2011]. Available at: <<http://www.fomentciutatvella.net/>>

Eixample

The Eixample nowadays has changed from what it was known as an extramural “ensanche” to what is considered as the center of Barcelona. Currently, it is a very dense area of approximately 880 hectares accommodating 550 street blocks and 125 kilometers of street. It is a busy residential and commercial area with a resident population of 350,000 inhabitants and 300,000 jobs. In addition, it has been converted to an area with more construction; with buildings of different ordinances, heights and depths; and the interior courtyards set aside for green spaces were transformed and built-up (Busquets, 2005). In other words, Cerdà’s proposal of green courtyards, squares, ventilation, and light was not applied.

For this reason in 1886, the bylaw ‘Estudio y Ordenanza Especial del Ensanche’ was passed and it defined the area of the ‘Conjunt Especial de l’Eixample’ and the ‘Sector de Conversació’. Its objective was to protect the Eixample; conserve its architecture and facades; organize and centralize the blocks; slightly reduce the building ratio; and open up the blocks’ interior patios in order to free them for community or public use and transform them into green spaces as in the original plans. As a matter of fact, this project was already outlined in the PGM and was extended by the ambitious scheme and works of ‘ProEixample’, a management body set up to promote and encourage improvements in this area of the city (Esteban, 2004).

As part of the idea of recovering Cerdà’s original proposals, the ‘Proeixample’ was created in 1990 when the City Council decided to take action by revitalizing the blocks’ courtyards. This corporation focused on the reactivation of the streets, improving the interior life quality, and most important, cleaning the inner space of the blocks and converting them into public, green areas. Nevertheless, in spite of all the difficulties of relocating residential, parking, and storage buildings, by 2010, ‘ProEixample’ has recovered 44 block interiors that

represent a total area of 93.000m², equivalent to 12 regulation-sized football pitches. This provided the inhabitants of the neighborhood with a green space approximately every 200 meters.¹⁶



Fig.28 Perspective view (1863) of part of Eixample’s open interior courtyards as proposed by Cerdà’s plan (1859).



Fig.29 Part of the Eixample nowadays.

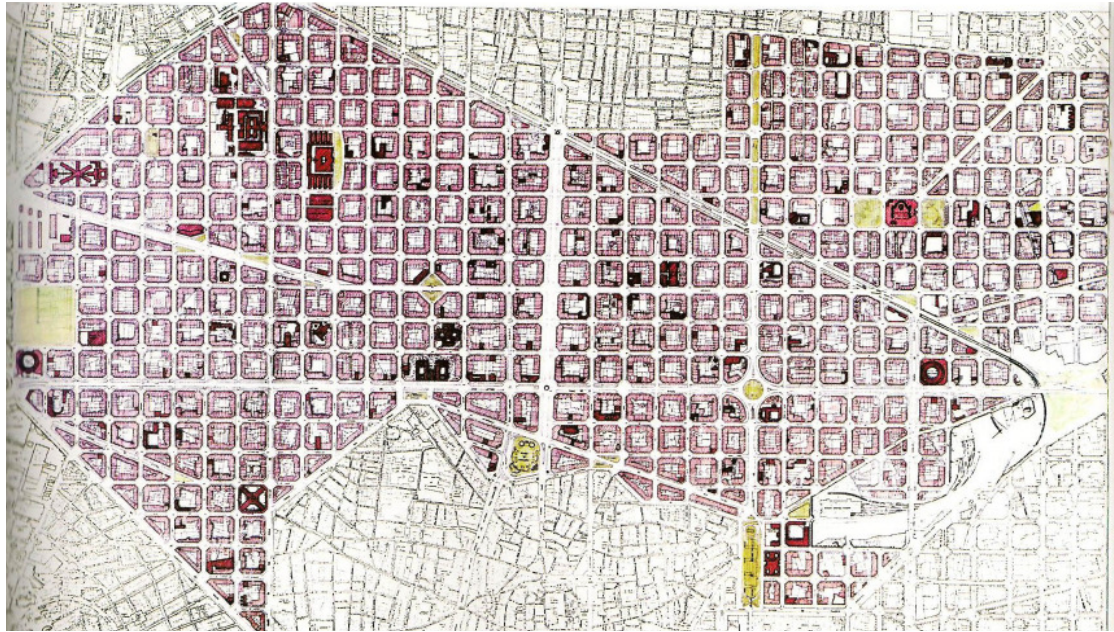


Fig.30 Eixample 1983

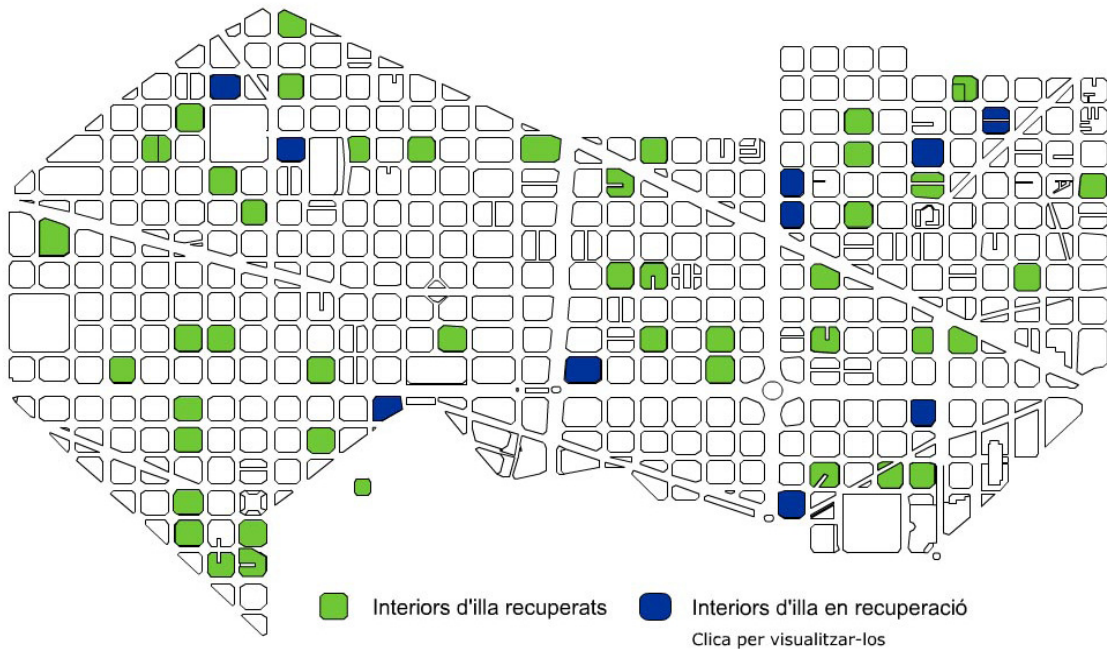


Fig.31 Interior courtyards recuperated by ProEixample 2011.

3. “Monumentalizar la periferia”

All European cities including Barcelona suffer from periphery or suburb problems especially those built during the 60s and 70s in the form of identical or similar parallel blocks without a correspondence to any urban form and without a disposition that attends to the hierarchy of the urban space. The suburbs exist because the city has not adapted to its new needs or has not reorganized its space and environment to accommodate the expanding population. They are the result of a poorly planned expansion that was subject to operative speculations that only intended to take advantage of the land's low cost, and lessen the intercommunication network, the public space management and the costs of services and urbanization. Those suburbs in themselves face the same problems as the historic centers. They are aggravated by the discontinuity with the center; social marginalization; irregular density; lack of urban centrality; lack of hygiene; and by the lack of instruments defining the urban infrastructure like streets, squares, monuments, metro-wide services, urbanized parks and commercial integration (Busquets, 1999).

In some European cities they are starting to demolish some of those suburbs. In Barcelona's peripheries, there is more space than the historic centers and their problems can be solved with different scales and instruments (Bohigas, 1986). However, the city's periphery also witnessed some demolitions especially during the Olympic Games of 1992.

The effect of the Olympics was a key reference point in the periphery especially in the areas that were part of the Olympic Ring. The urban fabric of the surrounding areas was restructured and improved especially the road connections. Network services were completed, such as the prolongation of the Diagonal to the sea and the Trinitat junction. Streets and architectural constructions were designed with coherent continuity and large facilities. For example, the Auditorio, Teatro Nacional, and Forum 2004 were constructed to integrate

peripheral segments to the metropolitan structure. In the area from Montjuïc to Poblenou many degraded and unhealthy industries and dwellings were demolished, preparing the area for the new Villa Olímpica. The beaches were remodeled with the Coastal Plan of 1985, the slums were removed and a new system for sewers and residual water were integrated (Bohigas, 1999).



Fig.32 The coastal front in 1987 (above). View of the same spot transformed in 1992 (bottom).

“Monumentalizar la periferia” was by the act of performing small operations of urban acupuncture but with the additional detail of placing monuments and public art that promoted and unified the urban and social identity of the neighborhoods. It proved to be quite effective in communicating its objectives to the citizens, thus, is the meaning of the expression “monumentalizar”. “Bohigas, hace ya

veinte años, insistía en la necesidad de lo que denominaba monumentalizar la periferia, en el valor de los monumentos como garantes de la identidad y de la memoria y también llamaba la atención sobre la concepción amplia y común que considera monumento no tan solo la escultura pública o el arte público sino también aquellas obras de arquitectura a las que la gente va otorgando este carácter” (Lecea, 2004: 5).

They provided the periphery with a symbolic content that “se desarrollaban bien en el proceso mismo del proyecto urbano de cualificación del espacio público...” (Remesar, Grandas, 2005).



Fig.33 Aerial view of Nou Barris in the 1980s

Public spaces and squares in those areas never acquired an identity nor an urban character, and some were choked by car parking like the squares in Gràcia, therefore, the acupuncture effect was performed as direct action that “actua como un spot ejemplar, como motor de una regeneración del entorno bajo la iniciativa de los propios usuarios, incluso provocando un nuevo equilibrio de la demografía...” (Bohigas, 1986: 18). It was by reorganizing and urbanizing these spaces --or in other words “monumentalizarlos” — that they became to acquire a sense of character, collectivity and centrality.

In the Villa Olímpica, projects were of an “osmotic” effect, and even at such a big-scale, many small operations of streets, squares and gardens were ap-

plied that enhanced its growth and enlargement as part of the center and re-qualified its surroundings (Bohigas, 1999).

In Diagonal and Vall d’hebron, apart from the new parks and sport facilities, part of the monumentalization process was in the creation of new connections and new monumental axes between neighborhoods such as Via Júlia, Rambla Prim and Rambla Guipúzcoa, among others (Remesar, Grandas, 2005).



Fig.34 Open spaces in Gràcia choked by cars

As for the squares they have been constructed over left-over and disjointed spaces such as Plaça de Sóller, others had been irregular old crossings and intersections such as the squares in Gràcia, Sants, Sarrià and Sant Andreu and some replaced old block buildings or industries such as Plaça de la Palmera. “El interior del territorio se remodela de forma constante, abriéndose plazas y mejorando ostensiblemente la calidad del espacio público, en parte con la instalación de obras de arte público, algunas clara permanencia de retazos de arqueología industrial símbolo de un pasado cercano, otros elementos de provocación, pero siempre reflejando un comportamiento cívico de gran impacto social y urbano” (Remesar, Grandas, 2005). Such operations projected an improvement in the surroundings, provided the inhabitants with spac-

es of quality, and prevented their displacement and exile to other areas.

“We must not despise therefore the monumental style (...) a style that is sometimes limited to the presence of the sculpture itself (...) to give monumental quality to public spaces in the suburbs so as to give them urban feeling and importance, and to clean up the central areas without destroying their sense of identity and historic buildings (...) In bulk of these squares (...) their monumental character in one of its two aspects, commemorative or artistic, is already bearing fruit in social cohesion through this search for, and physical imposition of formal dignity, which spread like a metastasis because it has been strategically sited.” (Bohigas, 1987: 12).



Fig.35 Fountain of Plaça Harry Walker located in Nou Barris designed by Marius Quintana (1999).



Fig.36 “Linea de la Verneda” located between Rambla Guipúzcoa and Rambla Prim designed by Francesc Torres (1999).

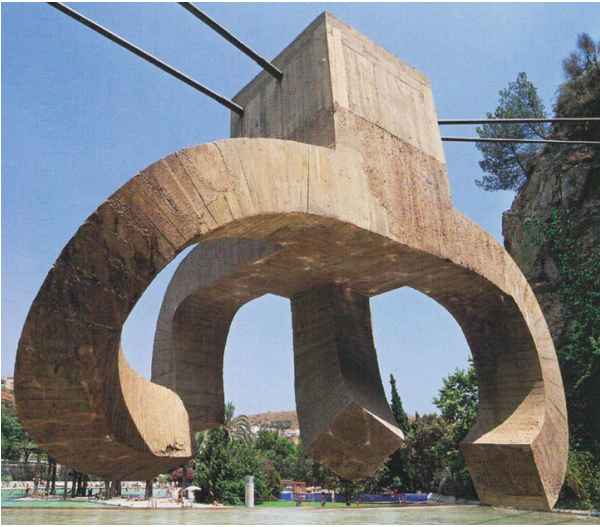


Fig.37 "Elogi de l'aigua" located in Parc de la Creuta del Coll designed by Eduardo Chillida (1987).



Fig.38 "Als nous catalans" located in Via Júlia designed by Sergi Aguilar (1986).