The aim of this study is twofold: On one hand, it is an essay against the zoning regulations applied in the suburbia. It operates as a progressive urban approach on potential architecture, which explores the spatial deterioration of the modern built environment by analysing the potential (also risks) of existing suburban infrastructures and generating new spatial games. On another hand, this is also part of the ongoing research experiences carried out by Ph.D. students at Barcelona School of Architecture (ETSAB) in the doctorate programme called ‘The New Tools of Architecture’. It triggers a more complex study on the manipulation of urban accidents. Also it emphasizes both the recuperation of public spaces in sprawl areas to preserve sustainable urban systems and also the creation of innovative strategies of urban reactivation mainly in European and Latin American cities.

Keywords: Public Spaces / Urban Games / Progressive Urban Studies / Research Paradigm for Potential Urban Studies

Part I. Free Spaces versus the Deterioration of the Public Domain

The denser we make our cities, the more we can sustain ecosystems.

Profound changes have been occurring in contemporary cities. Within our metropolis culture, everywhere is city and this structure is not longer defined as an object separates from its surroundings. However, what we have to improve is the articulation of the sprawl areas by reconfiguring new uses in the existing urban voids or ‘green zones’.

New configurations are being employed in order to maximise the activities generated by the urban spaces. The personalization of urban voids is becoming the correct mode to adjust them towards the occupants’ needs. But it has also been a smart line of attack to rescue the diversity and intensity of urban life in different scales by combating the obsolete zoning regulations mostly applied in suburban residential areas but also in downtowns.

What is happening with the vitality of the public spaces after the legacy of models of ‘rational cities’? Concerning the subject of environment and the reconstruction of free spaces
in modernistic housing areas, there exist a sort of opacity and passivity about how to handle the colossal change in urban economies after the collapse of CIAM’s avant-garde premises. In fact, we rediscover that density is not necessary the urban ‘enemy’ but the suburban sprawls.

The sprawl areas are seldom given as much attention and care, and often with few punctual interventions rather than a whole development program. The outcome is an increased fragmentation and segregation between the city centres and the peripheral housing areas. As a result, many European countries as well as American ones have the problem of large unattractive housing areas, where technical and functional shortcomings created an escalating circle of social exclusion and environmental decay.

**Free Spaces and ‘Urban Naturalism’**

City and public space are two concepts that are inevitably entwined and dependent on each other, but these express different circumstances of modern urban life. The dysfunctional urban model called ‘Functionalism’ led – as we have learnt during our architectural education – mainly limits and reduced the nature of public space to a picturesque ‘green patch’. At the same time, the physical and representative characteristics of the public spaces – or elemental urban cells – can delineate and sustain the entire urban network: the fabric. Examples of this can be found if we merely compare the organic organisation of pre-industrial towns versus the layout of the Taylorist manufacturing cities.

Manfred Tafuri posed that the modern urban astonishment derived from the experience of the industrial metropolis “is in itself a way of rendering anguish active”. Munch’s ‘Scream’ already expressed the necessity of a bridge between the absolute ‘emptiness’ of the individual and the passivity of collective behaviour.

The Modern Movement introduced a new form of urban organization, far from the traditional trend that unnoticed latent social issues during the industrialisation. The method applied was abstraction and repetition, creating an economical and efficient manufacturing building process that allowed a multiplication of zoning sprawl areas along the world. It also constructed a new variety of public spaces: the free spaces, with an open spatial plan but fragmented functional layout.

Post-modern city in motion indicates that the public life’s behaviour is visibly becoming pluralized, moving away from zoning models to a type of content-design mobility. As classic models of nuclear families erodes, new forms are emerging that offer new flexible ways of living. Can these new systems of urban life take place with an elevated level of spatial mobility? An answer might be found in the notion of ‘living-together-yet-apart’.

In this sense, the public spaces were reduced itself to a natural phenomenon by applying in the modern city the formal dimensions of the *Aesthetic of the Picturesque*: the Laugier or Milizia’s ideas that city is like a forest. But what does the city as natural phenomenon mean?

Urban Naturalism appears during the Enlightenment as the trend that attempts to manipulate the landscape into artistic ideology and negates the dichotomy between urban
that the notion of public space understood as a monument or stationary framework does function anymore.

Another matter that we might take into consideration is what potential architecture can play in the progressive development of the public domain. In fact, there exists an ongoing debate in many European Schools of Architecture, DOCOMONO and EUROPAN about what we can do in large sprawl areas built during the late Modern Movement, where the idea is to produce a townscape scenario that be perceived as more diverse, attractive and stimulating.

By working with games, the aim is to stimulate circumstances for plural and flexible neighbourhood’s life. New design games oriented towards provisional urban fittings, flexible and temporary uses and multifunctional spaces for goers immediately come to mind. At least the question is: What game shall we play instead?

**Situations in Nordic Suburban Areas:**

**The Culture of the Archipelago-City**

About facts, suburbia in Nordic countries is faced with the phenomenon of urban sprawl, splitting, and fragmentation. At the same time, individual autonomy is increasing and also the diversity of social interactions within the same family, professional mobility, and the speed of communication; all of which lead to a more spread out town tissues.

The main dilemma is double. On one hand, maximise the equation low-rise and high-density in the urban areas and, on another hand, build a model of ‘new urbanity’ regardless the climatic, social or economical contexts. Nevertheless, what does this dilemma mean? How can the dispersed Scandinavian suburbia be transformed into a sustainable urban fabric and rooted in the ongoing social and cultural demands?

Playgrounds set in public spaces by Aldo van Eyck in Amsterdam and outskirts. Almost everyone who grew up in Amsterdam during the ’50s, ’60s and ’70s is connected by an unusual fact: they once played in one of the more than 700 playgrounds in Amsterdam area designed by him! The playgrounds were exercises in non-hierarchical composition. Image above: Zaanhof layout, 1950. Image below: Play equipment. It was an integral part of the commission. Its goal was to stimulate the minds of children. Source: Aldo van Eyck’s archive

In terms of social mobility, comparative samples between public spaces might indicate that the concepts of partnership between temporary habitants and the pluralization of lifestyles could be introduced to foster the communities in sprawl areas.

In addition, actual urban societies undergo a quick transformation into a frantic existence such as camping life, lightweight and mobile homes and off-road culture. It means
The Scandinavian urbanity requires closer cooperation with other European cities’ experiences and town planning strategies. This necessity of urbanity can be defined as a common way of experience the city life and its complex and mixed functions, but also as a will to reflect upon the heterogeneity of its forms, and hence to create public spaces as a way to empower people’s communication.

Certainly, the paradox of contemporary urbanity cannot be resolved merely by tackling the housing function on a small scale. That is why the target must be focused on town planning and the construction of buildings, by improving the capacity of architecture to impact urbanity.

For instance, the ambitious housing programs carried out from the 60’s onwards in Sweden – such as Tensta in Stockholm or Angared in Gothenburg – were the result of a massive housing policy oriented towards suburb life and strongly led by the social-democrat apparatus.

Nowadays those cases have mainly transformed into social and spatial segregated zones where only displaced, low-income or conflictive communities must remain in.

1. **Large amount of unbuilt land**

The late urbanisation and low density of population in Sweden may have contributed to a special relationship to rural and natural environments. There exist a broad consensus about landscape values and environmental concerns. But there is also an obvious reluctance to accept any densification or urban development activities close to their own places. Thus, although as a whole there is a large amount of unbuilt land in and around Swedish cities.

2. **Leftover green and open spaces**

There is no actual deficiency of green and open spaces in and around Swedish towns and cities. After the WWII, the construction of large-scale traffic facilities and housing areas outside cities has resulted in large amounts of leftover green and open spaces. In planning practice, there is a lack of knowledge about these green areas, which in many cases are not even visible or identified in plans and other documents. However, these green spaces are often utilised by local citizens, whose knowledge could be valuable for planners.

3. **Lack of local knowledge in the planning process and low participation**

A free space in a sprawl area that from the planning point of view may be regarded as being a leftover land reserve might in reality be of great importance for local actors. There is a need for increased local knowledge in the planning process, which could be attained by improved communication strategies.

**Urban Dynamics**

So far few endeavours have been achieved by the academy to change the mono-functional programme of the modern public spaces in large unattractive suburban housing areas.

The possibility to use the public spaces as tool for progressive development of those areas has not yet been thoroughly examined. The concepts of massive outdoor recreation in streets, squares and parks are aesthetic paradigms, a sort of icons that carries a lot of our perceptions of what is good city life.

Let’s imagine us as goers walking along the Central Park in New York, Tiergarden in Berlin or Parc Ciutadella in Barcelona. Of course, all are remarkable patterns of urban parks. Nevertheless, the sustainable parameters to succeed these public spaces are high-dense fabrics and tight ecosystems.
Parc Ciutadella is located on the edge between the old fabric and the urban enlargement of Barcelona. This park was initially a World Fair and was situated to articulate the old town with the new extension in 19th century. Source: Suau

Nevertheless, our spare time occurs more and more in other places of public use, such as gyms, shopping malls, cyber-cafes, petrol stations, motorways, and so on. This diverse stock offers a possibility to discuss the new paradigm of the public domain as analogical-digital, multi-operative and versatile systems and also to examine new ways of (re)programming free spaces.

In short, we should consider the degradation of public spaces not merely as design problem but operational one. It derives from a lack of coherence between the variable demand of users and the array of common spaces.

**Urban Games and Soft Interfaces**

The necessity of urban operations based on elastic facilities and new manifestoes on what represents our common space seems imperative actions.

Examples of urban catalysts that perform as reconstructive surgery in the urban fabric can be found also outdoors of the Museum of Contemporary Art of Barcelona (MACBA) in Barcelona or the Centre of Modern Art (MAM) in Sao Paulo. Both are places where a multitude of people and cultural expressions interplay together and expand their public realms into the surroundings.

New programmatic games! Functional interventions made outside MACBA. They were carried out by MVRDV and Abalos & Herreros in Barcelona, 1998. Source: Internet (above)

Comparative satellite images of Central Park and Tiergarden. These massive public spaces are prostheses strategically implanted in the city and capable to regenerate or fix dysfunctional fabrics. In a large scale, both are pieces of ‘urban sugery’, no matter if they are grids or irregular forms. Source: Suau (photos from NASA archive), (to the left)
Thus, the urban image contains intensity and variation fed by the ordinary life. It is the public chassis that allows temporary and nomadic uses such as basketball fields, an open flea-market, outdoor exhibition for graffiti painters, barbecue facilities, skate-boarding competitions, and so on, with permanent ones. Motion and stationary life deal a territory not just to coexist but to survive.

Urban games appear as open source of architecture experiment mainly for the reactivation of public spaces. Thus architecture might be conceived as a combination of static ‘hardware’ and dynamic ‘software’. Driving the analogy further, architecture as game could be considered an ‘operating system’ within which people intervene with their own programmes for spatial interaction.

One model of operating system that is particularly relevant to this case is an open source system purposed by the artist Usman Haque. Through new interface development, he has been explored soft tech systems that incorporate the ephemeral qualities of architecture including smell, sound, light, heat or electromagnetic fields in the public space.

Sky Ear had its last full-scale public launch on September 15, 2004 at Greenwich Park, London. According to Usman Haque are currently no confirmed flights planned for the future, though various discussions continue. Source: Internet

**Part II. Workshop on Progressive Urban Research**

The cities along the History have always been featured by the existence of internal public spaces such as the notion of parks, squares or piazzas and promenades. However, what space may represent the notion of the public in the contemporary cities?

In order to respond this question, it is necessary to initiate a prospective search and analysis by working with young researcher under the realm of the reactivation of public spaces. The latent uses and the potential configuration of public spaces in the new urban economies constitute a strong gear towards a progressive urban regeneration in quarters that has not yet been thoroughly intervened. So, we proposed a wit way to research: *design by gaming*.
The Workshop on Progressive Urban Research (WPUR) performs as a research lab of the doctorate programme at Barcelona School of Architecture (ETSAB). It sets up to investigate the city as the spatial support for sustainable societies and as catalyser for everyday life by generating potential models, strategies and manifestoes.

Assumptions by WPUR

The WPUR is based on two assumptions:

First, urban life might improve their functional and environmental local sustainability through the progressive transference of tactics uses – from motionless to flexible functions – that consider social diversity and urban intensity. Inevitably it involves other games for urban negotiation by the insertion of new paradigms.

Secondly, the overlapping of permanent and mobile functions in the public spaces facilitates the sense of appropriation and participation, i.e.: urban dwellers as ‘consumers’ of public life.

Game as Research Paradigm

The experience has been carried out since the academic year 2004, under the doctorate programme ‘The New Tools of Architecture’ at ETSAB.

Our doctorate programme affirms that the limits of architecture flow from what is stationary and what is in motion. The ability to move, change or adapt is prerequisite for survive in cities. Thus, the courses study the urban phenomena of the accident, mobility, fragmentation and shrinking.

As result, these courses have progressively provided deeper insights into the structures and processes that characterize urban mutations in the suburbia. They have focused mainly in the following subjects: processes of space mobility; reinventing the suburbia landscape; urban intensity versus housing diversity; and the landscape versus the city scale.

Under the doctorate programme, three courses have been implemented: ‘The City Conceived from Modern Architecture’ (initial stage); ‘Cities in the World’ (intermediate stage) and ‘Potential Architecture’ (research stage). The intention of them is both to explore the complexity of any potential architecture, and also to develop a capacity for progressive criticism within the process of urban design.

The initial course ‘The City Conceived from Modern Architecture’ contained a workshop called ‘Programming Potential Public Space in Modern Suburbia’. This module identified new actions capable of shaping and qualifying the urban transformation produced by several situations in Europe and Latin America.
On one hand, it contributed to the enrichment of the student’s research skills, mainly on the design and renewal of public spaces, through applied studies of formal and informal suburban growth in developed or developing cities. Each project explored the reactivation of late-Modern public spaces, searching potential open environments within mass-housing areas.

On second hand, the research stage on Potential Architecture underscores that architectural project performs as a device capable of being or becoming space-frame. Therefore, it explores the use of constraining systems as strategy for freeing up unexpected trails of urban production.

**Conclusions**

I. The study reflects on the new role for dysfunctional public spaces in future cities. This is done from an integrated viewpoint that includes functional and technological aspects. The second part has been to expose a progressive urban research for the conversion of free spaces based on the principle of Radical Urbanity. It implies that WPUR becomes a pedagogic way to reflect on urban issues. It consists of four stages:

- Collecting data. It is the first stage of research. It sorts out and documents the theoretical study and specific data as well as bibliographic information.
- Research by gaming
- Progressive development of urban strategies
- Simulations and manifestoes of urban models. It is oriented to design strategies in the investigated areas.

All the Ph.D. students’ studies – from 2004 to 2005 – are being processing and will be issued in a digital magazine called www.ctrl-alt-supr.org on February 2006.

II. Urban games developed by WPUR are based on the following concepts:

1. **Multifunctionality,** by exploring new games through which this interlacing of multiple representations should be built up.
2. **Scaling urbanity.** How to think the scale of the new urban territory? How to imagine it with its lines of force and articulate a diverse and complex townscape? In the contemporary city, these questions are related to urban mobility, which strongly alter the way of thinking the city.
3. **Recycling urban fabrics.** The contemporary city produces hybrid urban areas formed of split up spaces and juxtaposed ones. How can these heterogeneous sprawl districts be restructured to sustain urban life?

Urban games imply the establishing of new guidelines for the design of public spaces such as:

1. **Mixed-use** in and around public spaces;
2. **Play and people-centred design,** where open systems place emphasis on users as designers;
3. **Low-tech media architecture** in which existing technology and spaces are re-appropriated; and

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Public space as urban prosthesis. Reflections on potential urban surgery in spoiled cities. Conceptual research and video were made by Olguin, Subbotin and Teixido. WPUR 2 was guided by Marcia Codinachs and Cristian Suau at Barcelona School of Architecture, January 2005. Source: WPUR archive.

During the design process, students should provide scalability, flexibility and interoperability to release maximal potentiality within projects:

- Identify potential obstacles: Whose are the ‘enemies’? Is there any risk?
- Explore possible architectures
- Look at potential technologies (low, light or smart ones)
- Define radical urban support and establish guidelines

Thus this doctorate programme fosters the use of exploratory instruments for the investigation combine with documents, bibliographical quotes, database access, and digital resources available on Internet. Students regularly meet for thematic discussions and commented reviews about the theses subjects.
4. **Source operating system**, where a collaborative framework is provided within which people create their own social space.

However, this urban regeneration can occur in terms of diverse and overlapped potential uses not necessarily related to what we usually identify as recreation or green fixed patterns.

III. The increasing of spatial flexibility and programmatic interoperability of public spaces is necessary in order to mould new potential places not imagined yet. This also means a wider understanding of the physical and social conditions of the chosen research fields.

The tendency towards multifunctional public places rather than free spaces means that different uses in the public spaces increases urbanity and thereby stimulates encounter between people.

It is a waste of public budget and might become another *terrain vague* without clear urbanity. Consequently, if we want to experience the authenticity of public Nature, we can take our vehicles and drive away there.

IV. The mixture of different uses and people from diverse social and economic backgrounds in these common places also means fruitful confronting of cultures and increase the understanding between them, which is a first step towards overcoming urban segregation.


This also means that the future condition of the public space does not rely only on parameters where the 'accuracy' of planning regulations indicates, for instance, that certain percentage of all built areas should be assigned to green portions, according to demographic or urban ratio. Also the general improvement of the public space does not imply the construction of a green urban support by a programme of forestation and pathways.
The public space today needs to be a response to the demand for complex activities that require dynamic cities. Quoting Tafuri, he affirmed that

*essentially it is the struggle between architecture and the city, between the demand for order and the will to formlessness, that assume epic tone in Piranesi’s Campo Marzio.*

In this etching titled *Campo Marzio dell’a antica Roma*, Giovanni Battista Piranesi creates the ‘New Romanity’. The prison building constitutes an infinite space. What has been destroyed here was the centre. As an urban game, it shows the collapse of the ancient order and the acceptance of the disorder.

Source: Internet

What should public spaces play instead?

The contemporary public space should work as catalyst for stationary and temporary events, a combination of static ‘hardware’ and dynamic ‘software’.

As a result it should avoid both the reductionism and stigmatisation of undefined zones. What it must discard is the aesthetic of the Urban Naturalism. Within the paradigm of Urbanity, the city is no longer considered the ‘enemy’ from which we want to escape.

Notes

2. Snake is a video game that is best known in the late 1990’s for its inclusion on some mobile phones. The player controls a long, thin creature that roams around, picking up food (or some other such item), trying to avoid hitting its own tail or the “walls” that surround the playing area. Each time the snake eats a piece of food; its tail grows longer, making the game more and more difficult. The user controls the direction of the snake’s head (up, down, left, or right), and the snake’s body follows.
3. Due to social change and a change of residence are closely correlated, urban sociologists aim to gain an understanding of societal trends such as pluralization and flexibilization, in order to sketch up recommendations about future requirements in the public spaces.
4. The Swedish definition of a built-up urban area is that at least 200 persons must live within an area with a maximum of 200m between buildings. This means that many ‘urban areas’ in Sweden might appear to be rather rural for observers from elsewhere in Europe.
5. System merely means a combination of elements that interact with each other and with the surrounding. Within the definition of ecosystem, the elements always include living organism, what they produce (oxygen, food or waste) and also energy input required. The equation is that all bio-elements contained in the system are able to feed on each other somehow.
6. Sky Ear is a non-rigid carbon-fibre ‘cloud’, embedded with one thousand glowing helium balloons and several dozen mobile phones. The balloons contain miniature sensor circuits.
that respond to electromagnetic fields, particularly those of mobile phones. When activated, the sensor circuits co-ordinate to cause ultra-bright coloured LEDs to illuminate. The 30 m cloud glows and flickers brightly as it floats across the sky.

7. Gaming means “the playing of games that simulate actual conditions especially for training or testing purposes”.

8. WPUR is a doctorate research workshop that involves the development of new spatial concepts. The creation of a new urban configuration is determined by interpretation and manipulation. New design appears by invention in relation to accidents, risks and potentials. This type of research focuses primarily on experimentation, including modelling in motion as practical instruments. Hypotheses must be testable, deniable or approved. This research does not merely involve the final product but the process-design.

9. Flexibility in urban systems is defined here as the capacity to undergo modifications and accept functional changes with limited structural interventions.

10. Shrinking is the “act or process of becoming less”. Shrinkage is a type of urban transformation that takes place, to begin with, in a radical manner without appreciably altering the physical space located in the zones of shrinkage.

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