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20th CENTURY NEW TOWNS
ARCHETYPES AND UNCERTAINTIES

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Archetypes and Uncertainties
Conference proceedings

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The planning and settlement of new towns were originated by different reasons. In twentieth century cities perhaps the largest reason was to determine new territorial and urban planning structures that would allow a better organization of the territory, ensuring the development of more efficient and balanced socio-economic models.

In some cases the construction of these cities was inspired by the principles of the nineteenth century English utopias, reflecting a strong concern in integrating the urban and natural components and highlighting the role of the natural landscape, understood as a city matrix on which articulates the urban structures.

In other cases the inspiration come from the rationalist ideals of the modern movement, seeking to personify the idealistic and democratic spirit of a new world order, producing rational and functional solutions and even if sometimes they do not fully overcome certain obstacles, an important contribution to the urban and architectural theory and practice advance was made.

Furthermore, other cases relate to the post-modernism and the emergence of critical views of the modern movement. These towns were born to give an answer to the problem posed by the large settlements deindustrialization and de-urbanization, assuming the role of organized urban extensions needed for controlling the sprawl of existing cities which was made through a process of unordered and peripheral urbanization.

Some focused mainly on a completely physical, economic and administrative independency in relation to major urban centres. Others, even if based partially on these principles of independence and geographical isolation, were planned as secondary structure networks dependent from a main urban conurbation. Many of these experiments have already been object of diversified studies addressing more or less specific thematic areas, seeking to define and apply critical and analytical methodologies to better understand and decode the processes and design criteria that were the basis of their urban and architectural morphologies.

Opting for an analytical prospective directed to re-contextualizing the urban and architectural contributions of these experiences, the conference 20th century new towns – archetypes and uncertainties aims to discuss their real effects in the present being especially welcome papers focusing on the following two aspects:

**I. Archetypes**  |  Spatiality, materiality and identities which persisted over time, not only because they have a high symbolism or because they are the emblematic testimony of a precise thinking about how to re-understand the city in a particular historical moment, but also and especially to continue maintaining the answering capacity to functional and practical demands of contemporary society. They are, in short, realities that did not required significant or radical changes to fulfil their function properly. The reasons for these archetypes remaining active and appropriate may contribute to
recognize them as meaningful and timeless, distant from temporal gestures which respond only to contemporary needs.

II. Uncertainties | Parts or components of the urban system that remained incomplete, leading to realities that persisted “open” or that were completed through different intentions, appropriation processes or intervention criteria from those planned in their original design. The nature of these uncertainties could be a further indicator of the effects produced by these archetypes in the city development.

Additionally the conference will focus three main thematic/panels covering the post-war satellite towns (as the New Towns Programme and other European similar experiences), the modern cities (as Brasilia or Chandigarh) and a more local perspective embarking the Lusophone New Towns (mainly in Lusophone Africa, but also in Brazil). The conference peer-reviewed call for papers will cover these topics and the communications will be organized under the respective panels, not excluding the possibility of accepting other related topics if they reveal pertinent for the global aims of the conference.
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Conference organization

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MAT BUILDINGS – GATED CITIES. 
Critical, change and paradoxical phenomenon in last 20th century new towns

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Abstract

The paper aims to revalue and to compare two urban phenomena of growth and change during the second half of the 20th century: the Mat Building and the Gated City.

On the one hand, Mat Building is analysed as a modern strategy of spatial and formal organization in architecture, which is related to the concept of Mat Urbanism. This idea is rooted in the interest of TEAM X in the traditional cities of North Africa, Japan and China, among others, during the late 1950s and 1960s. In 1974 Alison Smithson defined this urban structure using the model of Arab fortresses called Kasbah: “where the functions come to enrich the fabric, and the individual gains new freedoms of action through a new shuffled order, based on interconnection, close knit patterns of association and possibilities for growth, diminution and change.” Alison Smithson formulated an alternative to the functional city described in the CIAM´s Athens Charter. But she also proposed a new urban form, closed and opened at the same time, a kind of urban structure based on the necessity of identity and mobility.

On the other hand, the phenomenon of the Gated City is also closely related to the idea of urban identity. The CIDs (Common-Interest-Developments) began to emerge at the end of the 1970s, but actually, that idea was put into practice during the 19th century, as a reaction of utopian socialism to environmental and social consequences of the Industrial Revolution. In the context of the sprawling city, during second half of the 20th century, the New Urbanism also established its criticism to the urban ideology of the Modern Movement, as the TEAM X had done before them. However, unlike the previous one, this current used the paradigm of the walled medieval city, or Gated City, which was indebted to the anti-industrial manifesto of Rob and Leon Krier. They wrote: “function follows form”, and not the opposite, as Louis Sullivan had said. Therefore, a purely picturesque approach to urban form was adopted, against the rationalism of the modern post-war planning.

The paper compares both strategies through European and North American urban developments. It analyses their spatial and social structures pointing their own relevance in contemporary urban discourse, and it provides a critical relationship between them, which is full of paradoxes and contradictions for the sustainable urbanism and the land-use planning challenges.

Keywords: Mat Building, TEAM 10, New Urbanism, Gated city.
1. During the second half of the 20th century, urban planning has faced one of the periods of major change and growth of cities. Initially, the requirements of European post-war reconstruction caused the application of functionalist guidelines of the Athens Charter during the 50s. Then, as reaction during the 1960s, groups of younger architects, as the Team 10, led to a fertile and intelligent review with alternatives to the doctrine of the CIAM. At the same time, in parallel to these events of urban theory and critique, the reality was conducted by a rapid stretch of large cities. Especially in the United States, this period saw the emergent of a radically horizontal urbanism, driven by the enhancement of motorway and the suburban ideal of private housing. Meanwhile, in Europe, part of the debate focused on the role of the modern city and its relationship to the existing city.

From the contemporary point of view, our paper tries to revalue two urban process of growth and change of the late twentieth century: the Mat-Building and the Gated City, in order to analyse their spatial and social structures and to point their own relevance in contemporary urban discourse.

2. In September 1974, coinciding with the 15 years since the founding meeting of the 10 Team in Otterlo, Alison Smithson publishes *How to recognise and read to mat-building*. Following the death of Shadrach Woods on July 31, 1973, the article makes a first assessment of the achievements of the group and it presents a sort of manifesto of a new emerging urban organization called Mat-building. This idea comes in the middle of the debate on the role of the modern city and its relationship to the existing city. The urban paradigm during post-war European reconstruction was a blend between the Garden City of Ebenezer Howard and the modern functional city derived from the Charter of Athens led by Le Corbusier. Team 10´s urban tendency considers the importance of the independence between roads and pedestrian walkways, which had already been used by Ludwig Hilberseimer in his *Vertical City*, (1924) or the analysis of traffic.
flows of Louis Kahn developed for the Mid-Town Plan of Philadelphia (1953).

The group Team 10, in general, and the Smithsons, in particular, analyse the city in terms of patterns of association, rather than in terms of functional organization as the CIAM had done. Their proposals bring forward the streets of London’s working class neighbourhoods as inspiration for a new form of architecture and urban design. They understand the street as a stem of public life, an idea that is developed in the competition for a new housing block at Golden Lane (1952). Instead of Le Corbusier’s *Unite d’Habitation* and its internal street, the Smithsons do emphasis the building as a cluster within a bigger organism, in order to create a network of continuous buildings arranged in a kind of cellular pattern. Their building would be articulated with “streets in the air”, open galleries that provide access to flats, but at the same time also function as places for human encounter and interchange.
In 1974 Alison Smithson explains this urban structure outright, ‘mat-building can be said to epitomize the anonymous collective; where the functions come to enrich the fabric, and the individual gains new freedoms of action through a new shuffled order, based on interconnection, close knit patterns of association and possibilities for growth, diminution and change.’ (Smithson, 1974) Her words claim a multi-nuclear urban model that fosters social activity through control of urban density, a model that is able to grow and integrate large areas of public green space, and transform the chaos caused by the growing presence of the automobile into an ordered structure. Stan Allen has also insisted in these principles of mat-building: “Its job is not to articulate or represent specific functions, but rather to create an opened field where the fullest range of possible events might take place”. (Allen, 2001, p. 122).

However, the term mat-building has different nuances and annotations by the Smithsons, who did not give a single clear and unambiguous definition of it, as Carles Muro has studied. In one hand, Peter Smithson talks about “networks plans - so called mat buildings” in ILAUD 1980 in Urbino, definition that stresses towards the objectual nature of architecture. When ILAUD´s texts from 1977 to 1990 are reviewed for publication, Peter Smithson corrects the term to “layered
Mat-buildings are strongly influenced by the dense historical tissue of traditional cities. According to Alison Smithson, “The systems will have more than the usual three dimensions. They will include a time dimension”. (A. Smithson. 1974). So mat-building conception also recognizes that authentic city culture is the product of many hands over an extended period of time. In particular, the traditional Arabic Kasbah fascinated the Smithsons; its rich texture is “full of starts and stops and shadow... with a high degree of connectedness to allow for change of

net plan”. In the other hand, in the original document Alison Smithson proposes an earlier meaning: “Mat-Building: a newly invented connective urban arrangement”, emphasizing the planning aspects and the idea of urban landscape (Muro, 2011, p.45).

In fact, the term mat-building may represent the idea of building as mat, in the identification of the substantive character of 'building' or, conversely, if 'building' is understood as a verb, we would be talking about a way of create architecture, a formal system. The ambiguity of the term, together with the guidelines used by Shadrach Woods at the Free University of Berlin, “groundscraper”, reaffirms the mat-building as horizontal extension system that promotes the exchange and the feeling of belonging to a community, a concept between building autonomy and connectivity in the city. The most importance projects of Team 10 as the Frankfurt-Römerberg centre (1963) and the Berlin Free University (1963) by George Candilis, Alexis Josic y Shadrach Woods seem to demonstrate that the ambivalence of the term. Their flexibility makes syncretism between architectural design and city project thoughts easier. This strategy provides potentially enriching exchanges for both architecture and city, linking the genetic identity of growth and change of the built form. In that sense, the ambiguity of the term mat building, has served to stimulate the imagination of many architects since then. Examples such as the Agadir Convention Centre (1990), Rem Koolhaas or the Yokohama International Port Terminal (1995-2002), Foreign Office Architects have used that ambivalence although do not represent themselves a mat-building. The suggestive flexibility of the architectural form together with the patterns of association, have revitalized interest in Alison Smithson’s article.
mind and the in-roads of time” (Smithson, 1974). A kind of urban structure whose spatial qualities became condensed into continuous structures of interlinked stems.

Apart from Kasbah, many other traditional urban tissues are quoted by the Team 10´s interest. Alison Smithson´s text weaves words and images of several historical cities and buildings. She goes back to pictures and descriptions of Villa Katsura, the necropolis of Saqqara, Deir-el-Bahari, Sinan, Honan, Fatehpur Sikri and the vaulted constructions of Greek and Arabic architecture, suggesting that architects should create together with ancient architectures and cities. Her text does not distinguish between chronologies or styles, between small and large scale. But it seems that it tries to build a kind of conscious lineage of mat-buildings in which the project for the Berlin Free University (1963), together with their own proposal for the reconstruction of Berlin-Hauptstadt (1957), are the main characters.

The project of Berlin-Hauptstadt is one of the best examples to understand the multifaceted character of the notion of mat-building. The project illustrates the Smithsons’ ideas about mobility networks in post-war cities. According to the English authors, “the urban forms of Berlin Hauptstadt have as their basis the idea of mobility, of absolute maximum mobility, achieved by a layered movement pattern that separates the various means of expression and gives to each its own geometry, its own formal expression.” (Smithson and Smithson, 2005). Instead of divisions, which characterize the previous guidelines of CIAM’s functionalistic cities, they suggest that new ways of mobility ask for new physical and architectural patterns of connectivity.
The mat’s indefinite circulation network is the project’s generator. Its spatial organization takes the form of a multi-level grid with pedestrian walkways in upper level, and roads for vehicles in down level, linked by platforms and mechanic stairs. It reinterprets the traditional elements of the nineteenth-century city (streets, squares, buildings) to subordinate them to a new urban hybrid structure, which is building and city at the same time, resulting an open array type, different from previous historical models proposed by the Modern Movement. The paradox of this project is that far from integrating the new and the existing cities, it puts in crisis the model that in theory should pursue, that is the notion of *mat-city*. Interestingly, the architects propose a limit of buildings sinuous southward, which act as a border between the new city and the old one, being the only possible direction of free growth towards the Tiergarten. Therefore, in fact it emphasizes the idea of walled city as a model of inspiration. Rather than propose a kind of mat-urbanism able to expand indefinitely, Berlin-Hauptstadt is not intended to be sewn to the consolidated urban fabric and grow.
in all directions. Under certain point of view, it is actually more like the examples of historical cities described by the Smithsons, a defensive city protected by walls, or buildings in our case.

Nevertheless, the ideas of Team 10 have a clear integrative intention. Berlin-Hauptstadt is not based on the traditional continuity with the existing urban fabric, but it is based on a strategy that gives continuity to the landscaped and topographic elements. It produces an artificial urban carpet that adds to the existing layer as a palimpsest. It conceives the city as public free space per se, open space and uncrowded, in which the network of elevated roads and park together form a unitary whole. It does not distinguish between city and green space integrating both of them.

Moreover, the value of the proposal for Berlin lies in the design of a strategy of city that will allow the development and growth not in terms of planning, but in terms of adaptation to the changing patterns of human associations. It represents an alternative to the Rationalist and American models of New Towns, unsuccessful attempts of a new urbanism based on responses contrary to the traditional city; centre of low density versus centre of high density built in height; integration of green spaces versus sprawl city; specialized ways versus hegemony of cars over pedestrians; multi-nuclear centres versus unique centre with radial growth.

Therefore, the ideology of the 10 Team, in general, and of the Smithsons, in particular, is built as a thought in permanent evolution where the gaze to the past plays a key role. Their ideas conceive the History of Architecture as the history of anonymous shared problems, expanding architecture temporally and geographically, which they qualify endowed with enormous capacity to adapt to change, regardless of use, location or appearance.

3.

Alison Smithson’s article is clearly retrospective but is not closed to future. Since it was written in 1974, cities have developed in unpredictable ways. If certain strategies of urban development described by the article have dead-
ended, others have become more evident mainly because of the inevitably raises questions of scale and speed of movement. Stan Allen studies the contradictions that emerge when mat-building projects –Berlin Free University, Venice Hospital, Smithson’s Kuwait Ministries- move up in scale from architecture to urbanism through *Mat Urbanism: The Thick 2d* (2001). Instead of the ‘cellular’ aggregates of the earlier examples, a new spatial structure based on ‘stem’ or ‘cluster’ patterns appears. These new organizational principles imply the necessity of transportation systems in a bigger scale, so it tends to spread out laterally dispersing density. According to Stan Allen ‘if on the one hand, the Smithson were among the first to recognize the potential of infrastructure to influence the future development of the city, they also unwittingly endorse the conceptual apparatus of modern sprawl’. (S. Allen, 2001, p. 124).

Today, a new city form has developed, more extensive and less controlled than the post-war English suburbs that inspired Smithsons’ work. Cities like Los Angeles have developed as vast as mat like field. Orange County in California, with 2000 square km, initially appears as an appendix to the big city, but eventually forms a homogeneous and indefinite monotonous urban region of streets, office complexes and shopping centres that spread out endlessly without identity. In that context, the phenomenon of CID (Common-Interest-Developments) or Gated Cities begin to emerge at the end of the 1970s. A CID is in fact an ancient urban form. Jill Grant precisely defines “a gated community is a housing development on private roads closed to general traffic by a gate across the primary access. The developments may be surrounded by fences, walls, or other natural barriers that further limit public access. (...) Gated developments have an inside and an outside.” (Jill Grant, 2004, p. 913). These kind of fortified developments have become an increasingly common feature of contemporary suburban building patterns, especially in the United States1. Being eventually called architecture of fear, it is turning the urban environment into an

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1 By 2000, over 15 % of the US housing was contained within these common interest developments, and the number of units in these privately governed residential schemes rose from 701,000 in 1970 to 16.3 million in 1998. In 2002 the Community Association of America estimated that 47 million Americans were living in 231,000 community associations and that 50% of all new homes in major cities belonged to community associations. (Le Goix, R. & Webster, Chris J., 2006).
enclosed and private realm, which is a real challenge for space, organization and institutional order that shapes modern cities.

Figure 4. Orange County around Los Angeles. Source: Google Earth.

From an historical point of view, the idea of CID was put into practice during the 19th century, as a reaction of utopian socialism to environmental and social consequences of the Industrial Revolution. It is possible to find previous historical antecedents in examples of ideal cities of the Illustration. The city of Chaux, proposed by Claude-Nicolas Ledoux, a ville sociale partially built in the Royal Saltworks of Chaux (1775-79), near Besançon, would be a model for contemporary ghettos. Paradoxically, postmodern cities are becoming more defended, and more defensible, than were industrial cities.

Considering the complexity of some CID because of their size, as it is Hot Springs Village in Arkansas, with more than 10,500 hectares, there are smaller CID s that make us easier to understand the phenomenon at its micro scale. That is the case of Seaside, the small town at the cost of Florida where The Truman’s Show was filmed. It is a small holiday community founded in 1981 with 300 houses of homogeneous historicist appearance that seems to have been created expressly for this film. Andres Duany and Plater-Zyberk Elisabeth, architects and
professors in the University of Miami, design the urban plan of *Seaside* according to the ideology of the *New American Urbanism*. This is based on the recovery of characteristic morphologies of urban historical developments, such as Ebenezer Howard’s City Garden, and also based on the use of vernacular typologies for suburban areas. These architects reject the uncontrolled growth of large American cities and argue for models with recognizable identity as Oak Park, in Chicago, or Coral Glabes, in Miami, that inspire them. Mainstream is also indebted to the anti-industrial manifesto of Rob and Leon Krier of the 60s, due to their exclusively artisanal approach for the generation of urban form against the militant rationalism of modern urbanism in post-war. According to them ‘*function follows form*’, and not the opposite, as Louis Sullivan had said. Therefore, The New American Urbanism also establishes its criticism to the urban ideology of the Modern Movement, as the TEAM 10 had done before them.

*Figure 5.* Seaside, as a film set called Seahaven. Source: Peter Weir (1998), *The Truman Show*.

Analysing CID´s tendency in a macro scale, researchers have pointed that in areas as Los Angeles, gated cities help to stabilize the financing of urban growth, to redevelop aging neighbourhoods, to maintain social diversity, to conserve non-renewable urban resources, and to encourage reinvestment in urban infrastructure. According to Renaud Le Goix and Chris Webster, who explore the political, financial and environmental sustainability of private communities:
The regional diffusion of gated communities is related to suburban growth, an endemic anti-fiscal posture, and municipal fragmentation. (...) Although urban sprawl has generated an increased need for infrastructural development, property tax limits and fragmentation have reduced local governments financial resources. As a result, gated communities, which bring wealthy taxpayers at minimal cost, have become the perfect cash cow for local municipalities (...) By providing their own security, infrastructure and services; these developments reduce public financial responsibility. As compensation, homeowners are granted exclusive access to their neighbourhoods; a condition which enhances location rent and positively affects property values. Thus, these developments are instrumental in transferring the cost of urban sprawl from public authorities to private developers and homeowners. (...) This illustrates the point we have already made - that the club neighbourhood is an institution that can help sustain city growth by unlocking more resources for collective goods and services. (Le Goix & Webster, 2006)

However, these supposed economic gains are not made without social costs and spillovers. Thinking that opened cities are land-use systems consisting of interpenetrated private and public spaces governed by complex patterns of property rights; to break down municipal management into smaller gated cities might bring clear urban and social risks. In one hand, without planning supervision, private transactions generate spillover effects, such as material and auditory pollution, road congestion, and underused land. In other hand, resident filtering occurs often when restrictive covenants and property values limit potential candidates to join the CID. The result is social fabric homogenization by wealth, age, race and status. So this micro regulation through private covenants and exclusionary zoning further increases social segregation.

Even so, it is not possible to generalize the problems and benefits generated by the gated cities because they change depending on the size and type of CID. Blakely and Snyder’s research Fortress America. Gated Communities in the United States (1997) provides one of the most thorough investigations of gated communities available, and presents the most frequently discussed typology of
the phenomenon. They identify three types of gated community according to: lifestyle, prestige, and security zone communities, with their own circumstances. *Lifestyle communities* focus on leisure activities with recreational facilities, common amenities, and shared services at their core. *Prestige communities* serve as symbols of wealth and status for image-conscious residents. And *Security zone communities* close off public streets to non-residents. Other authors as Jill Grant in *Types of gated communities* (2004) have further provided a wider range of types of gated cities including new parameters as functions of enclosure; kind of security features and barriers; kind of amenities and facilities included; type of residents; tenure; location; size; and policy context. His work gives the key indicator that not all CIDs are solutions for economic and social elites, but they are also employed by public institutions as instruments of urban and social control. Thus, it is increasing the number of CIDs that due to the promise of a cheap housing, they finally confine disadvantaged groups into their own urban enclosure.

The phenomenon of the gated city is today as global as the own expansion of cities. Europe, Asia, Africa and South America have adopted the model to their own circumstances. Some gated cities promote extreme protection, as it is in the case of Alphaville, a gated community outside São Paulo, Brazil, has all of the facilities needed so that people can avoid venturing into the streets, where they worry about crimes such as murder and kidnapping. Others cities may provide potable water or other services, in some Third World locations. And seasonal cottage developments may have private roads that are impassable in winter when routes are covered with snow, and full-service master-planned communities offer shopping malls, schools, industry, recreational departments, and police. In this sense, cities associated with golf courses are a separate chapter. For example, De Haverleij, in the Netherlands, is paradigmatic because of its 180 hectare of golf courses and groups of castles of medieval appearance which operate as resorts. The author of this plan is Sjoerd Soeters and the author of the largest of castles, called Slot Haverleij, is Rob Krier. The whole design is clearly inspired by other military city-building as was the palace-fortress that was built by the Roman emperor Diocletian in Dalmatia at the end
of the III century BC. The example is a new step forward for the New Urbanism and the principles of gated city.

Despite of the wide range of CID´s requirements, there are two parameters shared by all of them. First, they have proliferated motivated by the effects of the uncontrolled sprawl city. Second, they have taken advantage of the paradigm of the medieval walled city to solve their problems. The new-gated communities are remarkably like medieval fortress, constructed to keep the hordes at bay. Perhaps the most important function of medieval gates was to control access to the city to collect taxes and manage trade. Concern about controlling traffic and pedestrian access remains a key issue for the inhabitants of gated enclaves. The gate provides part of what might have called the architecture of control, both for those inside and those outside: it reinforces the need for surveillance and the importance given to a social order, even if it is discriminatory.

4.

By exposing the evolution and characteristics of mat-buildings and gated cities, this paper has tried to outline advantages and deficits of them that may offer renewed interest for contemporary architecture and urbanism. The very essence of mat-buildings and gated cities is represented by their common interest about architecture of relationships rather than architecture of forms. Stan Allen´s notion of mat-urbanism shares aspects with the idea underneath them, ‘their form is governed more by the internal connection of part to part than by any overall geometric figure. They operate as fieldlike assemblages, condensing and redirecting the patterns of urban life, and establishing extended webs of connectivity both internally and externally.’ (Allen, S., 2001, p. 122). Both strategies take advantage of urban organizations like cluster, stem and mat, but with remarkably different results due to issues of scale and identity. Alison Smithson wrote: ‘The systems will present, in their beginning, an even over-all intensity of activity, in order not to compromise the future’. (Smithson, 1974) and it is precisely this lack of commitment with future that may have been a shortcoming of these trends.
Team 10´s mat-building relocates modern architecture within the tradition of urban form, breaking with the functionalist isolation of the guidelines of the Modern Movement and CIAM. Structural aspects found in the mat-buildings (overlay, continuity, identity, flexibility) are shared with the historical urban fabric. Therefore, they represent a certain return to the old city, after the urban ostracism of the avant-garde. But while those ingenious proposals arise, it would have been plausible to wonder about the critical size that the growth of mat-building may have. In the one hand, the Smithsons were among the first to recognize the potential of infrastructure to influence the future development of the city -under certain point of view, Le Corbusier also shares that merit- nevertheless, in the other hand, they have also unwittingly endorsed the conceptual apparatus of modern sprawl.

According to Jaime Ferrer “In theory, the mat typology offers a flexible framework for relating to a site through, an uninterrupted continuation of the urban fabric into its own spatial network”. (Ferrer, J. 2011) But in practise, today, it seems that the notion of urban mat and cluster, understood as a link in a chain of urban spaces, has been replaced by the idea of fortress, in response to the uncontrolled sprawl of the contemporary city without identity. Mat-buildings and gated cities demonstrate that architecture´s mediating role becomes increasingly difficult to maintain in a sprawling urban context; so new strategies are required.

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References


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