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# Urban Regeneration Strategies and Clusters as agents for establishing a new Urban Order

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*ABSTRACT. Recent discussions have highlighted the need to rethink the adjustment of urban environments to changing everyday needs, enabling a shift towards a new Urban Order. Assuming that urban interventions designed to address socioeconomic /environmental/morphological patterns, predispose the possibility of a new Urban Order, this article explores the role of Clusters as defining elements of such Order, discussing their role as potential generating poles for Urban Regeneration Strategies (URS). The article addresses the conceptual framework behind URS and Urban Clusters, discussing the potential of Urban Clusters as active parts of URS and defining elements of such Order, through the analysis of the Pompeu Fabra's University Cluster, in Barcelona. This discussion later concludes that URS can become primary tools for sustainable urban development and that Urban Clusters can act as disseminating agents of such Order.*

*KEYWORDS: Urban Order; Urban Regeneration; Clusters.*

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## **Introduction**

Contemporary cities have become the convenor pole of human activity, as natural habitats of modern societies (Rogers, 1997), reflecting the different behaviours and attitudes of Humanity. Their growth has been, however, much greater than their societies' ability to respond to new urban problems (Rogers, 1997), and their aptitude to reconvene urban environments (Abiko et al., 1995). Furthermore, the notion of Urban Design and its defining principles has deeply fluctuated, roughly over the last two centuries (Lamas, 2010), as the solutions to urban problems were generally found in redesigning the spatial morphology of Order (Adhya et al., 2010). These issues are far more reaching within the European Union current political and economic crisis context, as they can highlight the need to rethink the adjustment of urban environments to the transmutation of everyday needs, enabling a paradigm shift towards a new Urban Order.

This paper questions the "dominance of spatial morphology" in Urban Order and calls for the understanding of the concept as the resulting perception of the application of integrated guiding principles that introduce a balanced network of environmental, socioeconomic, and morphological patterns in urban environments. Assuming the hypothesis that reintervention, when based on continuous systems and designed to address the aforementioned patterns, predisposes the possibility of a new Urban Order, this article explores the role of Clusters [geographic concentrations of firms/companies/institutions, for stimulating innovation, synergistically interconnected in the same cooperation space (Marques et al., 2005)] as defining elements of such Order. This discussion addresses their role as disseminating agents of balanced order patterns and potential generating poles for Urban Regeneration, in the application of Urban Regeneration Strategies (URS).

Following this introduction this paper is organised into three main sections. The first reviews the evolving urban condition, overviews and redefines the rooted concept of Urban Order, analyses the philosophy behind URS and examines the importance of Clusters, in urban environments. The second explores the potential of Urban Clusters as active parts of URS, and defining elements of such Order, discussing the theoretical framework behind Urban Regeneration, including some insights on Intervention Processes and Interventional Procedures, as well as the development of Urban Clusters as disseminating agents of balanced order patterns. The third section explores the application of the aforementioned conceptions to a contemporary urban planning the Pompeu Fabra's University Cluster, in Barcelona. Following these sections, this discussion addresses the relevant findings and concludes if URS can become primary tools for sustainable urban development and the promotion of a new Urban Order, and if Urban Clusters can congregate the desired characteristics to act as disseminating agents of such Order.

### **1. Order, Regeneration, and Clusters in the Urban Context**

The concept of Order cannot be restricted to its traditional conception, according to Adhya et al. (2010), as the resulting contribution to visual and conceptual clarity of a system of relationships and physical dimensions between elements of urban scale. This suggests the need to reconceptualise Order, as a broader concept that addresses the socioeconomic, environmental, and morphological patterns of cities. For (Adhya et al., 2010), N. J. Habraken's identification of underlying orders

(physical, territorial, and cultural) truly establishes a design framework that addresses urban heterogeneity, complexity, and contradictions. However, based on David Canter's description of "place" as a juxtaposition of "conceptions, actions, and physical environments", the authors add that the prevalent notion of Urban Design reinforces the distinct rigid boundaries of such triad, resulting in a one-dimensional perspective of urban environments, and therefore mining any broader conceptualisation of urban order.

As this dogmatic model is conflicting and contradictory for understanding the constructions behind Urban Design, (Adhya et al., 2010), and conceptualising Order, an inclusive approach could be developed by deconstructing the existing model and imagining a different relationship that is overlapping and hierarchical. As a result, Urban Design from the perspective of Formal Order and Spatial Typology can be reinterpreted as reflection of everyday needs and activities associated with different urban typologies. Consequently, this discussion proposes the reconceptualisation of Urban Order as the resulting perception of the application of integrated guiding principles that introduce a balanced network of environmental, socioeconomic, and morphological patterns in urban environments.

On the other hand, the rise of creative economies (Landry, 2006; John Howkins, 2007), the result of "the so-called knowledge and information industries" (Thorns, 2002), has been one of the important trends in contemporary cities, as they have become the drivers of urban economies. It is now crucial for cities to attract and bring in new creative economies. This phenomenon has been accompanied by the increasing need for the renewal and revitalisation of urban centres, especially since the last decade of the twentieth century, commonly associated with URS (Ferreira, 2008; Roberts et al., 2000), in accordance with new principles and values of heritage preservation, associated with new management policies (Milão, 2006). In this context, Urban Regeneration can be used as a comprehensive strategy (Ferreira, 2008; Tallon, 2009; Roberts et al., 2000), as its socioeconomic and environmental outcomes can improve the ability to meet the demands and standards of creative economies.

Urban Regeneration arises as a strategic policy that integrates urban planning with the resolution of socioeconomic and environmental issues (Governa et al. apud Ferreira, 2008). Roberts et al. (2000) put forward the definition of Urban Regeneration as a comprehensive and integrated vision and action that leads to the resolution of urban problems and which seeks to bring about a lasting long-lasting socioeconomic, physical, and environmental improvement in the conditions of the area subjected to change. Furthermore, in the search for new strategies to deal with the arising urban concerns, Clusters were selected as a potential agent for URS, which can potentially transform the chaotic state generated by post-industrial metropolis, or rather, post-Fordist economies (Marques et al., 2004).

Clusters can become centres that generate urban redevelopment in processes of productive restructuring, due to the strong impact they have in their surroundings (Marques et al., 2004). Clusters evolved from productive agglomerations as districts or development poles, and are nuclei of small/medium interrelated entities in complementary productive sectors, which cooperate with research institutes, trade associations, local governments, etc., establishing synergies and linking agents in the same geographical location (Iglioni, 2001). They can be seedbeds or enclaves for innovation, according to Felsenstein (1994) and play an incubator role, nurturing the development and growth of new entities, facilitating the transfer of know-how to tenant entities, encouraging the development of faculty-based spin-offs and stimulating the development of innovative products and processes.

Clusters can also act as a catalyst for regional economic development or revitalisation and promote economic growth (Felsenstein, 1994). According to Marques et al. (2005), the importance and impact of Clusters in the processes of urban transformation, due to their potential as a possible economic and urban development tool, has been widely observed. The authors stress out that this happens especially in areas that have undergone a restructuring process, where Clusters have been transformation agents of the urban fabric, acting as regeneration producers, not only from a morphological, but also from a socioeconomic point of view. As possible tools of URS, this new type organisation is an alternative to the development of contemporary cities, which have had part of their territories disqualified, in the restructuring, re-industrialisation and deindustrialisation and processes, over the last 30 years.

## **2 - Urban Regeneration and the potential of Clusters as dissemination agents of Urban Order**

Despite several complementary definitions (Milão, 2006; Ferreira, 2008; Roberts et al., 2000), Urban Regeneration is seen as an elastic term (Porter et al., 2008). For Tallon (2009), regeneration means, simply, reinvestment in a place after a period of disinvestment, and URS are the various mechanisms by which regeneration occurs, whether state or market driven. Roberts et al. (2000) further defined Urban Regeneration as an interventionist activity, that straddles the public, private, voluntary and community sectors, and is likely to experience considerable changes in its frameworks, over time, in response to socioeconomic, environmental, and political circumstances.

An assumption that could be made from the fact that URS are elastic frameworks of vision and action is that they should not concentrate on a specific Intervention Process. Intervention Processes are the practices through which man acts upon the territory, building, expanding, transforming and reconfiguring new or existing urban layouts and environments, namely Urbanisation, Reurbanisation, Rehabilitation, and Natural Regeneration. Definitions and further contextual insights of: Urbanisation can be found in Gottdiener et al.(2005);Thorns (2002); Abiko et al. (1995); Lamas (2010); Moutinho et al. (2001);Alexander (2009); Tallon (2009);Pinho (2009); of Reurbanisation can be found in Thorns (2002); Abiko et al. (1995); Lamas (2010); Moutinho et al. (2001);Lago(2007);Pinho (2009); Ferreira (2008); and Roberts et al. (2000);of Rehabilitationcan be found in in Pinho (2009); Lago (2007); Ferreira (2008); Lamas (2010); Abiko et al. (1995); Cunha (1999);and CML (2011); and of Natural Regenerationcan be found in Carvalho et al. (2003); Müller (2011); Ferreira (2008); Lima et al. (2010);Lamas, (2010);Abiko et al.(1995);Alexander (2009);Tallon (2009);and Gottdiener et al. (2005). This research points out that URS should prefer the Intervention Process(es) that best adjust(s) to the temporal, morphological, socioeconomic, and environmental context of the target area.

Another possible assumption is that Interventional Procedures can provide an additional set of guiding principles that can complement Urban Regeneration's framework. Interventional Procedures are the theoretical approaches that address the promotion of balanced socioeconomic, environmental, and morphological patterns in urban environments, i.e., the promotion of sustainable urban development, for example New Urbanism, Sustainable Urbanism, Urban Acupuncture, and Ecological Urbanism. Frameworks and further contextual insights: of New Urbanism can be found in NewUrbanism.org(2012);Gottdiener et al. (2005); and Congress for the New Urbanism(1999); of Sustainable Urbanismcan be found in Adhya et al.(2010);Volkman(2010); and Farr(2008); of Urban Acupuncture can be

found in Parsons(2010);McCartney(2011);Bardauskait (2011);Kaye(2011); and Chan (2012); and of Ecological Urbanism can be found in Sporn(2011); and Mostafavi et al.(2010). This research of theoretical frameworks that move towards the definition of balanced order patterns in urban environments points out to the provision of a broader theoretical support to URS. However, these Interventional Procedures will also need to be redefined and adjusted to local, regional, and national contexts, in order to provide an integrated and adapted set of additional guiding principles.

Within the broader discussion for the sustainable development of cities, over the past decade, there has been a resurgence of interest in the spatial clustering of different kinds of activity, and the nurturing of Clusters has become an important component of public policy both at regional and local scales (Bassett et al., 2002). Hoeger (2007) adds that Clusters as space producers project their place-independent identities onto the urban space. They can give a place with weak identity a new one, reanimate the lost identity of an urban area, or transform and redefine the existing identity of a whole region, according to the author. As public-private partnerships Clusters entail advantages for both the underlying entities of within them and the city.

Although Clusters can provide the appropriate reality for all sorts of needs, as artificial islands, they remain predominantly untouched by the local milieu, since these evolving spaces have not yet conjoined with the surrounding urban layouts, says Hoeger (2007). He emphasises that they still are majorly identified as solitaire identities, which only over time will grow together with the existing urban fabric. Nevertheless, they have the potential to reactivate cities, providing possibilities for landmark character and a temporary sense of belonging. Therefore, the integration of architecture and urban design into Clusters requires sustainable urban design strategies and new planning instruments that creatively integrate socio-cultural patterns with pragmatic economic, functional, and environmental requirements, providing the required elements for establishing a new Urban Order.

Four major urban design factors, that further enhance local socioeconomic, environmental and morphological patterns of Order, influence a Cluster's responsiveness to its context, adds Hoeger (2007). First, the creation of meaningful identities that highlight environmental and ethical values and regional peculiarities rather than a global brand culture will enable local population to identify with the Cluster. Second, the creation of permeable/accessible open spaces and good transport connections is needed to foster encounters and local vitality. Third, a modular mix of functions, which condenses commercial and social spaces by complementing and enriching existing uses instead of displacing them, increases the Cluster's economic and cultural viability. Fourth, the Cluster needs a robust and flexible morphology to respond to changing needs, which can be associated with other emerging issues. Clusters can become disseminating agents of efficiency practices, and promote the balance between resource consumption and planned achievements in comfort, safety, security, access, etc.

A fifth point could be added to Hoeger's (2007) four major urban design factors, that influence Cluster's responsiveness to its context, which is a comprehensive and step-by-step framework of actions, that promotes diverse approaches, incrementally implemented, and provides the opportunity to learn from failure and success. This means focusing both on small, subtle, bottom-up interventions that harness and direct community energy in positive ways to heal urban blight and improve the cityscape, and on larger, top-down, interventions that typically require heavier investments and bureaucratic procedures. Clusters can provide the coexistence of both types of actions and provide/promote diverse incremental

approaches that could generate the positive contamination of their surroundings, reinforcing their role as disseminating agents of URS.

### 3 - Pompeu Fabra University Cluster

The City of Barcelona has had an innovative approach to Urban Regeneration. Some of the most important environmental contributions have taken place in the development of urban planning and in the transformation of the city into an international model of environmentally sensitive and innovative urban design (OECD, 2011). One example is the Pompeu Fabra University Cluster, strategically located in the centre of Barcelona, in an area that covers the lower part of the Ramblas and goes as far as the 22@ Innovation District (a recent hub of networking players and interfacing areas based on multi-scalar and transversal relations). In this context, the application of the concepts earlier presented to contemporary urban planning is explored through the analysis of the Pompeu Fabra University Cluster (Barcelona), by addressing its role as a dissemination agent of balanced order patterns and exploring its as an active part of Barcelona's URS.



Fig.1

Since its foundation in 1990 by the Autonomous Government of Catalonia, the Pompeu Fabra University Cluster has contributed significantly to urban planning, architectural refurbishment and reactivation of certain Barcelona districts. Pompeu Fabra's approach to urban planning can be referred to as a very good example of Clusters, as disseminating agents of urban order, based on the application of sustainable development principles. The Cluster allowed the creation of a meaningful identity that highlights local ethical values and regional peculiarities, such as the rehabilitation and retrofitting of some of Barcelona's historical buildings, or the preservation of local memory. As a result, Pompeu Fabra's Cluster is now composed by the Ciutadella Campus (7 buildings), the Mar Campus (2 buildings),

the Poblenou Communication Campus (5 buildings), and the Balmes, the ESCI Born, the França and the Mercè Buildings.

Since it is not an enclosed Cluster, it sponsors social interaction through public domains, contributing to a better relationship and improving the cooperation bonds between the University's and Barcelona's populations. This helps its incorporation into Barcelona's dynamic ecosystems, allowing the interplay between natural and social processes and addresses socio-environmental challenges within appropriate spatial and temporal boundaries. The Cluster contributes to a modular mix of functions, by complementing commercial and social spaces and enhancing existing functions, while enriching Barcelona's socioeconomic agenda. It is also associated with the promotion of liveable, healthy environments that enhance the introduction of mixed land uses in the surrounding vicinity, integrated with civic and community purposed sites. The University's research programs have also contributed to local urban dynamics, through the promotion of alternative/integrated transport systems, or pedestrian oriented arrangements.

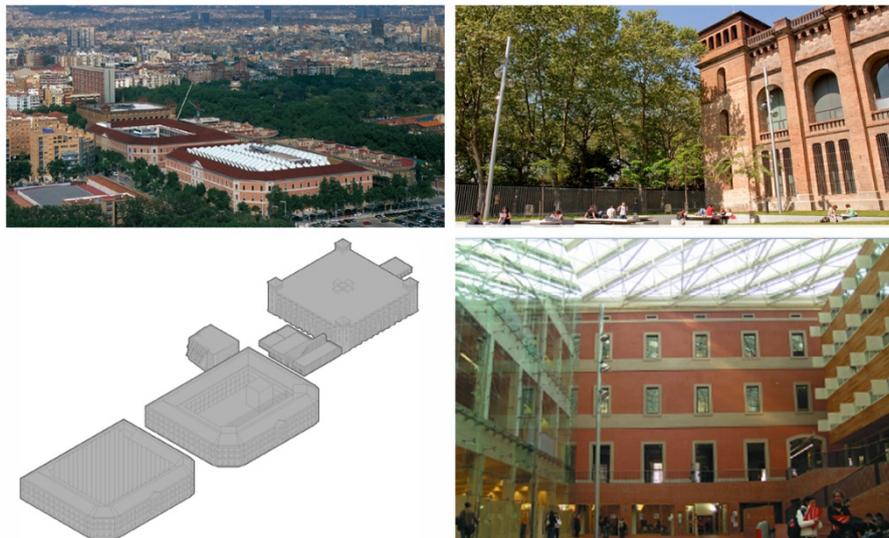


Fig.2

The fact that Pompeu Fabra has been very proactive in attracting top level foreign lecturers and research talents to the region, and has an active participation in international projects, networks and associations, additionally attests its role as an active agent for Barcelona's Urban Regeneration (OECD, 2011). Furthermore, the University is both participating in the preservation and celebration of the Catalan language and culture by building on the idea that linguistic distinctiveness provides the capture of typically national broadcasting and media production at the regional scale (OECD, 2011). The new Communication Campus, recognises and builds on the ability of the region to capture media resources, a critical ability, given the global importance of information and communications technology industries. What was perceived as a disadvantage, a minority language community, was transformed into an advantage in a multi-lingual European context.



Fig.3

Pompeu Fabra's Cluster model could be described as an efficient and effective one, which has had a direct and beneficial impact on Catalan society. It can also show how Clusters, as geographic concentrations of firms/companies/institutions, synergistically interconnected for stimulating innovation, can become potential generating poles of Urban Regeneration, thus becoming dissemination agents of a new Urban Order, a highly sustainable one. Pompeu Fabra's Cluster can be seen as an important contributor to balancing and enhancing Barcelona's environmental, socioeconomic, and morphological urban patterns. This discussion can also attest that this Cluster, not only potentiated its role as a dissemination agent of urban order, but also become an important partner in Barcelona's quest for Urban Regeneration.

#### Conclusions:

Traditionally, Urban Design has been conceived as a discourse in architecture that focuses on the design of urban environments as an object, offering the solution to urban problems by redesigning the spatial morphological component of Order. As Post-modern critical thinking raises questions over the design dominance in the conceptualisation of Order, and calls for understanding the complex relationships between urban patterns this discussion suggests and explores the need to reconceptualise Urban Order as a broader concept that addresses the socioeconomic, environmental, and morphological urban patterns.

Moreover, in a globalisation period, in which industrial sectors have been losing their importance to service sectors, global, interactive and responsive cities are the more adaptable to this transition. Contextually, URS can be seen as wide-ranging strategies that improve the ability of cities to meet the demands of creative economies, evolving societies and changing ecosystems. URS can become an integrated and comprehensive approach to solving urban problems that looks for a

long-lasting socioeconomic, physical, and environmental urban improvement. URS should be conceptualised within the local context of the target areas, therefore adjusting the intervention to local needs and envisioned as a strategic framework that ultimately will result in the simultaneous promotion of different Intervention Processes, adapted to the temporal and local context.

Within the broader discussion for the sustainable development of cities, over the past decade there has been a resurgence of interest in the spatial clustering of different kinds of activity, and the nurturing of Clusters has become an important component of public policy at local and regional scales. As possible tools of URS, this type of organisation is an alternative to the development of contemporary cities, which have had part of their territories disqualified, or are suffering from a disinvestment process. Clusters can become seedbeds or enclaves for nurturing the development of new entities that locally stimulate production and innovation, catalysing regional economic development or revitalisation and promoting socioeconomic growth.

The integration of architecture and urban design in Clusters requires sustainable urban design strategies and planning instruments that creatively integrate socio-cultural patterns with pragmatic economic, functional, and environmental requirements, providing the elements for establishing a new Urban Order. For corporate and public values to interact in a sustainable manner, the Cluster needs to offer a highly responsive and differentiated urban design. In order to promote sustainable development, a Cluster should inevitably relate to its local, regional, and national context. It should seek minimal environmental impact, respect local ecology and heritage, and understand architecture as never reaching a state of "completion" but as simultaneously reflective of, and responsive to, contextual conditions.

Pompeu Fabra's Cluster model could be described as an efficient and effective one, which has had a direct and beneficial impact on Catalan society. It can also show how Clusters, can become potential generating poles of URS, thus becoming dissemination agents of a new urban order, a highly sustainable one. Pompeu Fabra's Cluster performed well as a dissemination agent of Urban Order, and became an important partner in Barcelona's renaissance quest. Consequently, URS can become primary tools for sustainable urban development, and promote a new Urban Order within the conceptual frame presented. Finally, Urban Clusters can congregate the desired characteristics to act as disseminating agents of a new Urban Order, based on the promotion of balanced socioeconomic, environmental, and morphological urban patterns, within the promotion of URS.

## **Images**

Fig.1- Location of the Pompeu Fabra University Cluster's Campi and Buildings in Barcelona's City Map / Source (adapted from): Universitat Pompeu Fabra.edu (2012).

Fig.2-3D Model and perspectives of the Ciutadella Campus, one of the locations targeted for the implementation of URS/ Source (adapted from): Universitat Pompeu Fabra.edu (2012).

Fig.3 - 3D Model and perspectives of the Communication Campus -Poblenou, part of Barcelona's new 22@ Innovation District/ Source (adapted from): Universitat Pompeu Fabra.edu (2012).

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