

Informality of sprawl? Morphogenetic evolution in post-socialist Tirana

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Abstract

This research focuses on the urban transformation of Tirana, the capital of Albania, following the end of the communist regime in the early 1990s. While rapid urbanization fuelled by mass migration from the countryside to cities is commonly observed in many East European countries Albania's post-socialist urban form has been strongly influenced by the dramatic upheaval in land ownership that has taken place in the context of an inadequately developed legal system and involved the systematic appropriation of open space by developers. The impact of this urbanisation on Albanian society has been profound, but currently there are no systematic studies of the morphological processes that have transformed Albanian cities. This paper begins the process of addressing this deficiency. It identifies four distinctive patterns of informal growth in contemporary Tirana. The variety of post-socialist urban transformation morphologies can tell us much about the particular nature of urban growth in Albania under conditions of unrestrained, loosely regulated, development. The paper draws on the Tirana case study to comment on the nature of social change in the Albanian context, and the way in which 'planned' and 'unplanned' urban environments have contributed to the emergence of distinctive modes of urban life. Conzenian and space syntax approaches provide the methodological basis for morphological research into Tirana's post-socialist built environment. The configurational data is mapped to geo-referenced datasets of Tirana at the building scale, including details of building age and legal status. An initial survey of land uses is done for the case study areas. This integrated methodology is intended to help elucidate both the morphological dynamics of post-socialist Tirana and the broader implications of this urban transformation for Albanian society.

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Introduction

This paper focuses on post socialist urban developments within the urban area of Tirana, comprising of the area within the 'yellow line'- that is the administrative boundary of the Municipality of Tirana. A comparative analysis is made between two periods: a) Tirana's built form from 1992 to 2007 and, b) socialist era developments 1945-1991. The paper focuses on describing Tirana's morphological evolution pre- and post- 1992, in order to identify organisational typologies and assess how far these ideas can be explained by contrasting ideologies of governance during these periods.

Tirana, was until relatively recently, a small town. It became a city in 1921 when it was also named the capital of Albania. Since then there have been three distinct ideologically influenced urbanization periods in Tirana: a) the pre-war period 1921-1945 which was mainly influenced by Italian architectural style and planning model; b) socialist era development 1945-1991 influenced by Soviet architecture and planning practices and c) post-socialist development from 1992 a period characterized by unregulated urban expansion and illegal construction. Table 1 shows how these distinct ideological periods are associated with distinctive character and architectural styles.

Conceptualising post-socialist development

During the Soviet period of hegemony in Eastern Europe, Hamilton et al. (2005: 42) argue that urbanisation is attributed on the one hand to inherited urban patterns and on the other hand to different types of economies and cultures. "Socialist" cities changed radically through the construction of new housing estates whilst in city centres far less physical change occurred than in cities of similar size in western countries with market economies (*Ibid*: 40). After the fall of totalitarian regimes all across socialist Eastern Europe a capitalist city model emerged (*Ibid*: 71). The changes leading to the dissolution of the socialist city model, initiated partly by the state, partly by the market, and partly by unplanned development processes, occurred in different forms across the Eastern European countries (*Ibid*: 71). Research has suggested that there is no single post-socialist transformation model but a range of analogous cases bearing general trends (Stanilov, 2007, Nase and Ocakçi, 2010, Tsenkova et al., 2009.). In south-eastern Europe a particular form of urbanisation process has been proposed. Scholars have used various metaphors to refer to this process" "Balkanization" (Hirt, 2012), "Turbo-urbanism" (Jovanović Weiss, 2006) and "Turbo-architecture" (Jovanović Weiss, 2006). These metaphors reflect cultural dispositions expressed through spatial outcome; such terms directly associate to geographical context and cultural characteristics of the Balkan region.

In the early 1990s 'informal development' was the common denominator of spatial evolution across the post-socialist Balkan Peninsula. There is much insightful research about informal development and urban sprawl, particularly focusing on large scale regional case studies. However, at the micro scale this process is still under researched (Neuwirth, 2005, Huchzermeyer and Karam, 2006, Stanilov, 2007). Relevant literature on informality Besussi et al., (2010: 21) defines urban sprawl as 'low density development with a segregation of uses'. Yet, as Batty et al., (2004) argue there is no firm definition of what other land use characteristics must be existent for a development to be classified as sprawl. As an alternative conceptual frame for sprawl, 'informality' tends to be categorized as a land use *problem* and thus often 'managed through attempts to restore order' (Roy, 2005: 155). Sometimes though, it is simply considered easier to define sprawl by what is not rather than the other way around (Ewing, 2008). Besussi et al. (2010: 17) state that when defining sprawl the arguments conflict with each other on almost everything, from their conception and rationale through to the measurement of sprawl. Of particular interest in terms of this paper's argument is that informality as a process, and sprawl as an outcome are associated with modes of human settlement that occur outside of formal legal structures and processes (Porter et al., 2011, Dovey, 2012, Longley et al., 1991). As systematic studies on informal settlements have shown, cities are built from informal processes as much as formal ones (Dovey and King, 2011). For instance, the

Table 1. Ideological and architectural periodization of Tirana's development since 1921. Source: ALUIZNI, 2015, Aliaj, 2003, INSTAT, 2001.

| PERIOD | HISTORY | BUILT ENVIRONMENT |
|--|--|---|
| PRE SOCIALIST | Tirana became a city in 1921. | Italian architectural style influence. |
| I. 1921-1938 | During this period Albania's urban population was small with just 15.4% of the population living in urban areas. | Vernacular architecture. |
| II. 1939-1945 | Forced migration towards urban areas increased for security reasons associated with World War II. There is a slight increase of population living in urban areas, 21.4%. | Italian style inspired architecture and planning model. |
| SOCIALIST DEVELOPMENT | Soviet socialist dictatorship. | Soviet-influenced state-planning. |
| III. 1946-1959 | The ongoing increase in urban population achieved its peak in the early 1950s. During this period the national annual growth of urban population was 1.4%. | Soviet planning models and architectural typologies. |
| IV. 1960-1991 | Urbanisation slowed down with annual population growth dropped to ~0.1%. | The introduction of prefabricated building systems. |
| POST-SOCIALIST DEVELOPMENT | Unregulated illegal construction. From centralized- to free market economy. | Informality. |
| V. Early post-socialist 1992-2007 | Heavy migration towards urban areas with, 65% of the migration moved towards to Tirana. Unregulated urban development, 520,000 illegally constructed dwellings were constructed all over Albania, of which more than 100,000 units were built within the county of Tirana. | Turbo-architecture, Turbo-urbanism, "Self-made" cities. |
| VI. Post-transition period 2007-present | In 2007, ALUIZNI digitized the built form of Albania on GIS platform, including fine resolution imagery. Consolidation of planning legislation and authorities. General improvement of infrastructure, public realm and facilities. | Semi regulated development. |

medieval fragments of many European cities are amongst the oldest of informal settlements in time (Dovey and King, 2011: 12). Dastidar argues that regardless of the level of irregularity in their structures, the basis of spatial practice in society remains the same and it doesn't differentiate whether it is in formal organized blocks or the informal settlements (Dastidar, 2007: 4). Understanding spatial form and practice is important, in particular when dealing with complex phenomena at multiple scales such as characterise informality. However, what Dastidar suggests is that discourse on urbanism may help in developing new paradigms for dealing with informality (*Ibid*, 2007: 5).

This paper focuses on post-socialist urban development starting around the last decade of the 20th century. In Albania the process of illegal construction started in early 1992 straight after the collapse of Hoxha's socialist dictatorship (Aliaj et al., 2004, Felstehausen, 1999). Privatization and the occupation of land and buildings opened the city to rapid development, heavy traffic, and booming construction of shops, houses, and squatter settlements (Felstehausen, 1999: iv). The 2001 PHC showed that 65% of the total migrants shifted towards the capital from all around the country (INSTAT, 2001) as a consequence Tirana's metropolitan area almost tripled its population from 225,000 to 600,000 inhabitants (Felstehausen, 1999). All across the country, during the early years of post-socialist urbanisation, there was a marginalization of architects and Town Planning Institutions (Aliaj et al., 2004) leaving the process of planning and design in the 'hands' of the inhabitants. In contrast to other countries in the region, in Albania almost the entire dwelling stock built during these early years of transition was "self-made" a term used to describe informality and informal settlements by UNECE (Tsenkova et. al., 2009) in their report on Informal Settlements in Southeast Europe.

Research of post-socialist urban development in Eastern Europe reflects that most post-socialist urban development trends share similarities with western European developments. However, studies so far exclude Albanian and some ex-Yugoslavian cities from this tendency, as their post-socialist urbanization process was different if compared to all the other eastern European models (Hamilton et. al., 2005: 74). Albanian cities faced a quick transition from the socialist to an unregulated "developing countries" city-development model (*Ibid*, 2005: 73). During the post-socialist era there have been limited formal capital investments, especially during the first decade of transition. By contrast, there have been significant investments by the Albanian population in the illegal construction of commercial and residential property (Pojani, 2013, Hamilton et. al, 2005). Albania's development of a free-market economy led to the dissolution of all previous types of public control without the introduction of new types of formal control over the land market, planning and building process. This lack of regulation led to densification concentrated in central areas and sprawl outside the centres.

Methodological Approach

This section outlines two methodological approaches that inform our research into the post-socialist transformation of Tirana. The study of urban form, often referred to as urban morphology, features a number of different perspectives. One method that has attracted increasing interest since the early 1980s (though it has a much longer genealogy) is Conzenian plan analysis (Whitehand, 2007: ii). The methodology for the study area in Tirana is informed by the three morphological levels of Conzenian analyses: the town plan, or ground plan (comprising the site, streets, plots and block plans of the buildings); building fabric (the three dimensional form); land and building utilization (Conzen, 1960, 1968, (Whitehand, 2001, 2007). The concept of 'morphogenetic priority' will be explored to provide understanding of lifespan of the elements that form complexes as contributors to the landscape – which are ground plan, land and building utilization, buildings (Whitehand, 2007: 6). Evidence presented in this paper relates to the first of these. During the last years of the twentieth century Conzen's ideas and perspective were taken up widely, possibly due to versatility of how these notions could be applied to both specific and more general case studies. An interesting notion of the Conzenian research is the 'neighbour effect', which explores the spatial relationship between physical changes to dwelling houses at a plot scale (Whitehand, 2001: 107). This notion will be used to rationalize post-socialist development at a fine scale throughout the case study areas.

The second methodology used to inform this research is Space syntax theory. Space syntax (Hillier and Hanson 1984, Hillier et al. 1976) argues that morphological arrangements contain social information. Hillier and Hanson (1984: 55-66) develop this idea using the notion of the 'beady ring', that is a spatio-temporal unfolding of a simple local rule. 'Beady ring' is formed as a result of generative process which bears a number of formal properties. The 'beady ring' concept is applied to help to understand how local, informal

processes encode social rules and to enquire what this might mean for the development of Tirana in different ideological periods. The local rule is consistent with prevailing social and cultural norms and can therefore be regarded as phenotypical and as settlements grow global genotypes emerge (*Ibid*, 1984: 55-66). This research is pitched at understanding the process through which, and the extent to which, the range of phenotypical (local rules) in Tirana emerge as genotypical forms of relation at the, global, urban scale.

Regardless of the significant differences between these two research traditions, the value of promoting a dialogue has been acknowledged by previous studies (Larkham, 2006, Griffiths et al., 2010). This research endorses a combined approach of these two methodologies. On one hand noting the Conzenian concern for the historicity and materiality of urban form, on the other hand space syntax's emphasis on how emergent spatial arrangements are also patterns of social information.

Changes of human circulation, land use and building form can give a more accurate insight of how urban form in regard the block as a structure is altered over time. It is interesting to consider these evolutions at two scales; at individual plot scale; and at block scale. Morphological studies have acknowledged (Maitland, 1984, Siksna, 1997, Hillier, 1999) the importance of the block as a fundamental element of the physical structure of urban areas, in both planned and unplanned settlements (Siksna, 1997). Siksna's approach demonstrates that certain block forms and dimensions perform better than others in terms of adapting to past and present development requirements; his findings suggest that initial block forms and sizes lead to predictable outcomes in successive development (*Ibid*, 1997: 19). For instance, his research claims that in case of incompatibilities between plot size and building form the issue can be resolved either by developing new building forms in response to constraints posed by plots, or by creating plots through subdivision or merging in response to required building form (*Ibid*, 1997: 29). This will be considered in the Albanian context where post-socialist development transformed existing block structures and at the same time led to the creation of new blocks with a wide range of sizes and form. In the context of Tirana, this research takes into consideration the specificities of different cultural, social and economic forms have in common when seen from a spatial point of view. To represent the post-socialist urban evolution in Tirana, figure ground analysis has been integrated to the final analyses in order to graphically testify development patterns -which then are compared to the socialist built form.

Due to its complex nature, sprawl presents a challenge to traditional analytical methods and requires an interdisciplinary approach in terms of methodology in order to derive a coherent description of patterns and trends of urbanization (Besussi et al., 2010: 29). It is important to apprehend cities simultaneously as spatial entities and social dimensions. This paper asks what distinctive morphological patterns of growth characterize post-socialist Tirana and how we can understand these patterns both as a spatial and social phenomena?

Identifying morphological patterns in post-socialist Tirana

An essential element of the morphogenetic approach from its early days was the mapping of the different physical forms within urban areas (Whitehand, 2007). Urban morphologists Birkhamshaw and Whitehand emphasise the fact that the recognition and delimitation of various types of urban form are fundamental in morphological studies (Birkhamshaw and Whitehand, 2012). The evidence presented in this paper seeks to elucidate on the morphological evolution of the post socialist urban forms in Tirana. In this context, raising the question of differences in development patterns between these two periods; in terms of ideology and architectural language in Tirana since 1990. During the initial phase of this process, importance was given to establishing criteria for the selection of the case studies. To achieve this first, the most recent aerial map of Tirana was put in GIS platform superimposed with the geo-referenced built form and road network. All the data was acquired from the institutions that produced these 'official' data as three separate layers. Second, the distinctive patterns were identified and cross checked within the case study areas and across the city in a heuristic process. Third, a series of case

Table 2. The four principal morphological patterns of post-socialist urban development in Tirana.

| Category | Characteristics | Land Use | Legal Status |
|--|--|--|--|
| Pattern 1 infill. | Mostly present on previous recreational open public spaces. This development pattern is represented both by single family units to multi storey apartment blocks. The main characteristics of this pattern include: occupation of (former) public spaces, steep decline in surface of recreational public open spaces, fragmentation of existing blocks, increasing of through movement, densification of the block, intensification of the active facades. | Mainly residential units, with ground floor allocated to business and services. | The vast majority of the units have been built without official permit from adequate authorities. However, only a small percentage has been built 'legally'- holding a permit- in conform to the law. |
| Pattern 2 extension to existing buildings. | This pattern is primarily present in areas of apartment block quarters built during the socialist period. The extension occurs when an addition is built on existing (pre 1992) building, usually starting off from ground level up to the last floor. The surface of the extension can vary from 5m2 to +100m2. These extensions were created to serve the original function of the existing building which was mostly residential. However, with time the majority of the ground floor extension has been converted into shops and service units. These extensions were built from the owners themselves rather than just as a result of an illegal construction from an outsider. | The vast majority of the extensions have been built in order to increase the size of residential units. However, in the majority of the cases, especially along streets, the extension on ground floor has been converted to business or services. | Most of the units have been built without official permits from adequate authorities. However, many of these extensions have obtained legal tenure after being built. |
| Pattern 3 disordered. | This pattern can be found predominantly in brand new neighbourhoods and at a smaller ratio in recent developments among existing built areas. Usually, when Pattern 3 is represented through newly formed neighbourhoods, they are located in parts considered as outskirts or suburban in terms of pre 1992 Tirana. However from a contemporary Tirana's perspective, these areas are very much part of the city's urban area. The common denominator in these cases is disordered development, where chaotic relationship between the buildings among themselves and the building, the plot and the street are prevalent. | Mostly, residential units, excluding only a few cases where the ground floor has been turned into business or service. | The majority of the units have been built without official permits from adequate authorities. However, the owners of these buildings –who do not have legal ownership yet- have applied for legal tenure right and their application is pending to be processed. |
| Pattern 4 semi structured development. | Semi structured pattern refers to post-socialist development that has a level of structure in the way new units and new unit groups are formed. In this case the new developments | Mostly, residential units, excluding only a few cases where | The majority of the units have been built without official permits from adequate authorities. |
| | forms semi structured blocks with direct connection to the street. The road network this pattern creates when at block scale shares features of orthogonal grid system, especially when formed on previous empty land. | ground floor has turned into business or service. | However, the owners of these buildings –who do not have legal ownership yet- have applied for legal tenure right and their application is pending to be processed. |

Case study 1 - Figure 2.

This area can be categorized as heterogeneous. The built form and land uses varies hugely within the blocks. The ground floor of the buildings over time has often lost its residential function in order to gain new functions; mainly shops, cafés and services. Another characteristic of this area is that on a considerable amount of buildings new extension were built, from the ground floor to the top floor, changing not only the buildings footprint but allowing a varying amount of two- and three dimensional changes to happen. For instance, one building that had only one access point or connection with the street now has four or five connections to the street. Additionally, this led to the creation of new alleyways often not longer than 5 to 7 metres to facilitate the new functionality which made the building itself accessible from more than one edge of the facade. These extensions –even though

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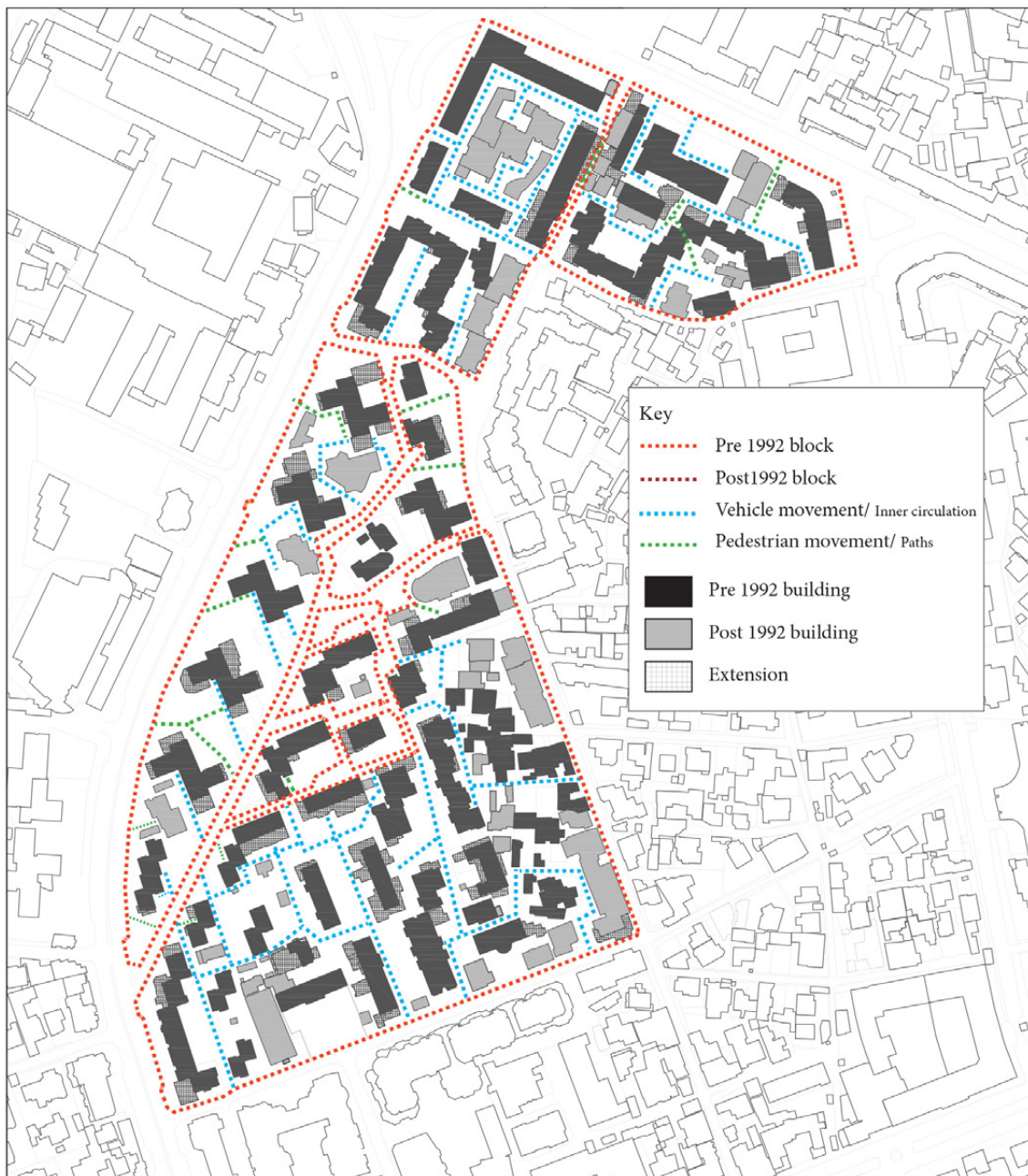


Figure 2. Case study 1.

only at a minimal ratio- have also been added to the top floors of the pre- 1992 buildings. Another distinct development pattern is that of infill, where vast public spaces were transformed to accommodate single family in dwellings or several families in high rise apartment blocks. All the post-1992 transformations have led to the fragmentation or separation of existing blocks, recreating the way these blocks work, the way they connect to each other and the way they can be accessed and moved through. These patterns of development are significant in shedding light on what this research aims to understand: the morphological evolution of the urban grid with particular interest in the consequences land use change and built form development brings to existing blocks. In this case study from the four identified patterns the most predominant pattern are 'Pattern 1' and 'Pattern 2'.

Case study 2 - Figure 3.

Is one of the largest post-industrial sites in Tirana. Previously, the 'Kombinati' area hosted the biggest textile industry in Albania, providing hundreds of jobs. The area of "Kombinati" was segregated structurally from the rest of the city, and was perceived as an outskirts of Tirana that was disconnected from the city's everyday life. This specific area was previously occupied only by the factory sites and was a pure industrial zone. Nowadays, it accommodates many families who built their dwellings around the industrial complex or even adapted part of the industrial buildings to their living purposes. However, the industrial building stock nowadays mostly serves as warehouses or as service units. The former industrial buildings over time faced several low quality architectural interventions which mostly consisted of extensions to the existing buildings or building of smaller units



Figure 3. Case study 2.

in close proximity to the original units. Post-socialist transformations contributed towards an amalgamated spatial outcome for the entire site. Possibly, this nature of somewhat chaotic development is mainly attributed to the serious amount of legal issues that are present among the legitimate owners of the area. In this case study from the four identified patterns the most predominant patterns are 'Pattern 2' and 'Pattern 3'.

Case study 3 - Figure 4.

What is distinctive about this case study area is the fact that the site itself does not have any pre 1992 building stock. The entire area before 1992 was just empty land. It only became part of built areas in the city post 1992, despite the fact that it lies on one of the main arteries that connects Tirana to other cities. In this study area the most prominent land use category is residential, excluding the land strip at the southern edge, where priority is given to commercial activity. The layout of the built form in relation to the road network is somewhat a structured orthogonal grid creating direct connection between the plot (the building) and the street. All these units are detached dwellings that vary from one to three storeys in height. In this case study from the four identified patterns the most predominant pattern is 'Pattern 4'.

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Figure 4. Case study 3.

Emergent processes and historically resilient structures

The generative component of space syntax theory shows that as objects are placed in space, a *structure* of some kind emerges in that space (Hillier et al., 2007). Throughout the analyses the diagrams reveal this *structure* does emerge. The new *structure* in this case has caused a deep fragmentation of the original block form. New streets and alley roads have opened up the pre- 1992 blocks in order to integrate the new buildings and facilitate the new land uses –especially in parts that formerly were considered as quiet inner residential areas.

Morphological research sheds light on how changes in form, density and land use of individual buildings contribute to fragmentation or even creation of new blocks. The path dependency and the skeletal structure of the built form in a city is important particularly because this structures' built form and movement routes accommodate the loci of socio-spatial activities (Besussi et al., 2010: 14) According to Batty and Xie, another factor that influences *structure* is the change that occurs in cities as a result of addition of new activities; this due to the change of patterns of development through the process of redistribution (Batty and Xie, 1999). Batty and Xie suggest that the change of location for an activity sets off a chain reaction so that other activities are motivated to move, finally, such activities readjust their locations to the changed circumstances (Batty and Xie, 1999); this could be supported also by this research as most of the case studies unfold this argument where the post-1992 developments have served as generators to the new land uses which subsequently raised new activities. Whole blocks, before 1992 had single land use -that of residential. However, what the surveys have shown is that post-1992 a new pattern on land use change was initiated –especially on the ground floor of the residential units. These changes led to the transformation of these buildings land use, which simultaneously raised the need of these buildings to adapt how they could be accessible from the streets. Multiple entrances were added to buildings which previously had only one access point, enhancing the amount of connections of buildings with streets. In order to facilitate these new entries, new alleyways were added on other facades of the buildings.

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Regardless of Tirana's relatively 'young' age, the concept of 'morphogenetic priority' can be applied after analysing the case study areas (Whitehand, 2007: 6). For instance, in Case study 1 the road along the western edge of the study area is part of the ring of Tirana. It is one of the oldest structured roads of the city; its importance to the road network has been relatively resistant to change over time, and it is still recognizable in the landscape today. What the analyses reveal is that historical elements (the ring in our case) constitute a morphological framework that influences the development of the city's formation (Whitehand, 2007: 6); in contrast as the research has suggested land use and building utilization tends to be more temporary (Whitehand, 2007). What is contrasting though with the same theory is that in Tirana's case buildings are not always intermediate in their resistance to change; buildings did change their function briefly after most of them were built -that on the ground level indeed. However, this shift from the perspective of the 'morphogenetic priority' concept can be interpreted not only as a result of transformation in space, the strong political and economic changes within the pre and post dictatorial regime context should be acknowledged. The Conzenian concept of 'neighbour effect' (Whitehand, 2001: 107), seems to be a strong generator of some kind of domino effect- which is present in all three case studies. This study reinforces what previous analyses have shown, that changes are clustered over time and space according to various studies of spatial diffusion (*Ibid*, 2001: 107). In the case of central areas, represented through Case study 1, this effect is distributed almost evenly achieving its peak point along major road connections where it can be hypothesized that one of the major contributors is the perspective of changing original land use from residential to commercial activity. The diagrams show that where these extensions were made, often new movement routes were added which have led to the fragmentation of the block or even to creation of new blocks in more rare cases. In the other two Case studies, the building stock is almost entirely developed post- 1992. Here the domino effect can be observed if considering sprawl- as the way these residential units were developed is somewhat

of self-regulated or 'self-made'. Extensions were only made to the pre- 1992 built form, which in this case as the diagrams reveal is unique to the industrial site. The analyses suggest that there is a level of interaction between access points and the four patterns of morphological developments. This relationship will be the focus of a subsequent stage of research initiated by this preliminary study.

Persisting land ownership issues, lack of planning and design intervention and continual economical drive have led to ongoing transformation through some main already identified patterns. The purpose of this study has been to outline an approach to 'informality' embedded in the ideological context of the pre and post-socialist development of Tirana. The four patterns described in the three case study areas provided a starting point for this enquiry into morphological pathways of social change in Albania.

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