Morphology of the urban organism in Cyprus. The effect of borders and political changes in the fringe belts of Girne, TRNC

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Abstract

The contemporary city is developing inside and outside the limits of administrative territorial entities, and sometimes the urban organism is out of the control of local town planning. Nevertheless city limits, within the formation process of urban tissues, develop through time changing status from dividing limits to centralizing areas (Caniggia and Maffei, 1979), (Strappa, 1995). The notion of “fringe belt”, as developed by M.R.G. Conzen and the school of urban morphology of the University of Birmingham (Conzen, 1960), (Whitehand and Morton, 2004), describes coherently the change of status of these areas. This paper analyses the formation and change of fringe belts in the city of Girne, TRNC (Kyrenia, Cyprus). The case study of Girne, TRNC, as developed after 1974, is an interesting example of change in urban growth within a different state and local authority which enhances the open fringe belt formation, as happens in most metropolitan areas, determining a scattered and unplanned urban growth. The post 1974 changes of the fringe belts of this city will contribute to the further comprehension of urban policies used in the Turkish Republic of Northern Cyprus after the division of the island following the Turkish military occupation. The case study of Girne (Kyrenia) will be also useful for the discussion and the comparative analysis of post 1974 urban growth of cities in the south side of Cyprus (Charalambous and Hadjichristos 2011), following the latest trends of the research in urban morphology (Gu and Xu 2014) to understand the different land use policies, the property issue, the contemporary urban planning policies and the future urban design strategies in Cyprus.
Introduction

The contemporary city is developing nowadays as an unplanned organism, sometimes inside and sometimes outside the limits of administrative territorial entities, so it does happen quite often that the urban organism goes out of the control of the local town-planning authority. Nevertheless the city limits, within the formation process of urban tissues, develop through time changing status from dividing limits to centralizing areas (Caniggia and Maffei, 1979), (Strappa, 1995). The notion of “fringe belt”, as developed by M.R.G. Conzen and the school of urban morphology of the University of Birmingham (Conzen, 1960), (Whitehand and Morton, 2004), describes coherently the change of status of these areas. This paper analyses the formation and change of the fringe belts in the city of Girne, TRNC (Kyrenia, Cyprus). The case study of Girne, TRNC, as developed after 1974, is an interesting example of abrupt change in the urban growth pattern within a different State and local authority, a change usually enhancing the open fringe belt formation, as happens in most metropolitan areas, determining a scattered and unplanned urban growth. The post 1974 changes of Kyrenia’s fringe belts will contribute to the further comprehension of urban policies used in the Turkish Republic of Northern Cyprus after the division of the island following the Turkish military occupation in 1974. The Girne (Kyrenia) case study will be very useful for the discussion and the comparative analysis of the post-1974 urban growth in Cyprus, (Charalambous and Hadjichristos, 2011). The case study will also, following the latest trends of the research in urban morphology (Gu and Xu 2014), describe the different land-use policies, the property issues, the contemporary urban planning policies and the possible future urban design strategies in Cyprus.

The third largest island in the Mediterranean, Cyprus, has a strong growth in terms of tourism and economic interests and real estate, Northern Cyprus, the territory occupied by the Turkish army following the civil war, after the regime change in 1974 developed a rudimentary foreign policy to explain the communal perspective on the island’s political difficulties. Two factors constrained the development of Turkish Cypriot foreign policy. First, Turkish Cypriots lacked the personnel and resources to project themselves on the world scene. Second, Turkish Cypriot administrations lacked international recognition and were dependent on Turkey’s acting as an intermediary. The situation changed gradually after 1985, although Turkish Cypriot activism in foreign policy focused on expanding trade and political contact, rather than on the settlement process. International attention would help a Cyprus settlement. After 1974, the Turkish contribution to the Turkish Cypriot budget was estimated at 80 percent, but by 1990 that subsidy was reported to be in the 30 to 40 percent range. The opposition press in Turkey occasionally complained about aid and assistance to northern Cyprus. For their part, Turkish Cypriots complained of inadequate aid, the failure as of late 1990 to establish a customs union, and the importation of Turkey’s economic problems, most notably rampant inflation in the late 1970s and again in the late 1980s. Relations were also strained by social differences between Turkish settlers and the higher levels of education and more urban and secular lifestyles of most Turkish Cypriots. Much needed foreign exchange would be supplied by university students and tourists, both groups primarily from Turkey. Northern Cyprus, with a population of 300,000, currently operating nine universities and a 10th coming up soon, according to the Higher Education Council, or Yodak, the government body charged with overseeing them. A total of 63,000 students are enrolled in these universities, of whom only 13,000, about 20 percent, are Turkish Cypriots. An additional 35,000 are from Turkey, and 15,000 international students come mainly from countries in Africa, the Middle East and Central Asia (www.devplan.org).

Without a resolution or accession, Turkish Cypriots would have no alternative but to accept further integration with Turkey. The invasion force, which consisted of about 40,000 soldiers and 200 tanks, subsequently was reduced to a garrison of 17,000 troops. The strong presence of military bases is an important factor in the expansion of cities in Cyprus. The areas around the two important cities of the TRNC, Famagusta and the capital Nicosia, developed without a plan, with no respect of the context and without new essential services. Many parts of these towns and cities do not follow a master plan indicating a regular grid or a standardized series of residential plots. This is particularly true

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in their fringe belts. The percentage of mass housing developments constructed during the last 50 years was before 1960, 19% (British period), between 1960 – 83, 25% (Cyprus republic period), after 1983 increased until 55.7% (Turkish federation).

Methodology

Kyrenia’s geographical position is on the northern coast and flanked by a tall mountain ridge (Pentadaktylos). The city includes the Castle dating back to 1191 referring to Richard Lionheart’s campaign in the area. It is thought that the castle may have been constructed in around VII AD, although there is no recorded exact date of construction. The architectural style and materials of the old buildings surrounding the harbor and the city center, shows the different characters inherited from different cultures from the Greeks, Romans, Lusignans, Venetians and then the Ottomans. The traditional Cypriot settlements reveal a cohesive character with well-scaled narrow streets and cul-de-sacs and organic open public spaces at the intersection of streets and the houses are simple in size and architectural details, most of them are courtyard houses. It generally exerts a sense of complexity, because one is confronted with an unexpected opening and closing; this creates a dynamic urban pattern and a positive orientation in the area. Width of streets is changeable. In some sections the passageways are so narrow that the visual continuity is broken and the space is well suited for social interaction. The buildings are usually not more than three stories high and horizontal lines are dominant on facades as in traditional Turkish houses. Kyrenia, presents a number of problems for researchers familiar to urban morphology and that have ventured outside the European countries. Through an analysis of urban morphology that grows over time the research will come to study the fringe belts that have characterized the city of Kyrenia, highlighting the various stages of the development of the urban fabric in the last 40 years. Conzenian urban morphology can help the understanding of urban landscapes in the current era of concern for urban conservation and landscape management (Whitehand, 2005). The application of M.R.G. Conzen’s research method on urban morphology, showed the need to update the geographic method in the period of upheavals of the city, caused by changes in production and economic-social factors following the second industrial revolution. Another interesting effect about the urban fabric is the Old Turkish Quarter built outside the historical center. This part of the city was built after the Ottoman rule around the 17th Century and is now protected as the historical center of the Town.
The general Urban Plan of Kyrenia (Girne Beyaz Bolge) is following the cadastral mapping, performed by the British administration in 1918 ca. and revised in 1930s. The division of the territory is in five regions (Nicosia, Kyrenia, Famagusta, Guzelyurt and Karpaz) and plans are in scale to 125,000 and 25,000 for the districts and the sub-areas.

The United Kingdom designed plots during the acquisition of Cyprus in 1878, recognized as a colony after the First World War. Shape of the plots approaches the cadastral structure described by Conzen in Alnwick, they are following the streets, and head of the lot contains the main building, while the back is occupied by the court or garden and often hosts service buildings or accessories. There are two cadastral maps designed by British administration, the first one describes the urban fabric in 1918, and the second one shows the design of the expansion of Kyrenia after 1930, both of them are scaled in 1:500. The newer districts of the town do not seem to follow either a logical development system or a locally appropriate urban pattern. They are totally different in their urban character, and the residential buildings in these areas are modern concrete-frame slabs and construction isolated on their individual plots. Important presence are the military bases which are breaking the continuity of the urban fabric, they are located next to the centre, and along the seaside. Local identity is lacking, even the new square of the municipality or the monument square which are the two nodal, polar squares of Kyrenia right now, Ramadan Cemil Meydani and the square next to the Dome Hotel. Both squares lack three-dimensional qualities; the major node serves as a traffic roundabout only, and the other square, despite its potential of being a lively gateway to the harbor area and a ‘place to visit’, reveals a very artificial image and cannot attract people at all. In addition, green elements that are characteristic to the region are not valued; there is no clear identity in the newly developed quarters and their negative features greatly endanger the identity and local values of Girne.

Formation process

This investigation is an attempt to explain the present structure of a town plan by examining its development. Instead of working backwards from present’s confused picture, our morphological analysis has followed the growth of the plan. In this way it has been possible to obtain a clearer conception of how the plan has become the cumulative result of a diverse process which kept going by successive functional impulses within the broad scheme of morphological periods. The theory of plan analysis developed here opens a wide field of
research in two directions: in the first place it needs to be connected with a full investigation of the associated patterns of land use and building types in order to produce a complete interpretation of the townscape, secondly, it should be extended to cover different functional types of towns, as well as towns of different cultural areas. Through the theory of urban fringes subsequent growth stages are recognized, as if they were the rings in a tree, every new phase seems exclusively represented by buildings of its relevance only in the outer parts which are growths constituting the contemporary. Fringe belt, a critical reading that coincides with the draft of the transformations of the contemporary city and that indicates a process operating and confrontational, which allows interpreting, choosing and drawing in continuity with the great flow transformation of the city in its history. Historical urban process and landscape allows you to understand the morphologically marginal urban areas of each phase of development, the growth of which is changeable and read according to changes positioned in the economic and social realm. The aim is to decode the structure of the suburbs, beyond their apparent chaos. The fringe belts, therefore, manifest fully their characters during the long periods of stasis in urban development, when the low value of land is associated with the reduced population density (Whitehand, 1998). Factors identified in the structure of peri-urban agricultural areas, the widespread presence of building specialized tertiary and a broad network of routes, along with elements that allow identifying the different scales the “typical behavior” of fringe belts. Most cartographical and statistical data on Kyrenia have already been gathered as this project benefits from previous research on the city. Nevertheless, some complementary data should be gathered. For example, the historical geographical approach will require complementary data on building heights and uses; the process typological approach will need information (from the local authority and the historical archive of the city) on building plans, façades and sections; and the spatial analysis will require data on population and employment (as the drivers of change). No complementary data are needed for the space syntax work. The application of this approach will focus on the concept of the morphological region. A typological analysis of existing buildings in relation to existing data, should enable the identification of the main building developments in this area. Axial analysis and segment analysis will be developed to explore the configurational characteristics of the streets included in the case study. This will focus on the concept of cell using a cellular automata model to analyze this area of the city. The application of the four morphological approaches to one area will help us to understand the main strengths and limitations of each approach and the most effective ways to combine them to better explain and prescribe the physical forms of cities.

Like a number of coastal settlements in the Eastern Mediterranean, Kyrenia began to grow rapidly in the late-nineteenth century. The resultant type of urban environment is very common in Mediterranean Europe (Vilagrasa, 1990). Illegal housing was mostly located on agricultural land near to the built-up area. It was deficient in infrastructure, services and accessibility to the city centre. Small houses were converted to family houses as the population increased and economic conditions improved, and eventually these areas were legalized by official urban plans (Ünlü, T. 2012). There have been various attempts to classify fringe-belt studies. Whitehand (1981) grouped such studies into three categories according to the ideas they developed and the approach they adopted. In a further study, he updated this categorization in terms of a schematic genealogy, taking account of the different cultural contexts (Whitehand, 1988). The present study explores the evolution of urban forms, whose features are the subject of public policies and development strategies regarding the input vector that has prompted the expansion of the city, as well as its management of open spaces (Whitehand, 2003). The fringe belts are commonly fragmented spaces, but they can, in some cases, form a system, as they are usually structured by fixation lines and axes, such as roads, rivers, hills and mountains. Urban Morphology methods have been used to develop research considering the urban form as a product of the action of political, social, and economic forces, as set forth by public policies (Macedo, 1998). Fringe belt concepts have been used to guide research on open spaces and to set up their evolution process in an attempt to identify them within an urban framework. M. R. G. Conzen (1960, 1962, 1969, and 1978) identified the characteristic features of inner fringe belts within towns and cities of medieval origin.
A recurrent feature was the medieval wall and fortification zone, which acted as what Conzen termed as a fixation line. In due course, it was often followed by a ring road. The associated inner fringe belt was divided by Conzen into an intramural and extramural. He termed this type of fringe belt a ‘closed fringe belt’ (Conzen, 1969) since it was completely closed off from the present urban fringe by subsequent zones of residential and other developments.

The Inner Fringe Belt with its ancient fixation line and consequent ring road represents a separate major plan type, forming an uninterrupted zone round the Ancient Borough. It shows great irregularity in structure and outline because of its peculiar mode of evolution (Conzen 1960). It owes its individuality as a plan type as well as its areal coherence to the grouping of its plots and their dominants along the consequent ring road, and to the contrast it provides with the more homogeneous plan types on either side. Indeed, heterogeneity is one of its main features, notably as regards plot sizes and types as well as their grouping. This enables several sub-types to be distinguished from the rest. (Conzen 1960)

The presence of a fixation line is a factor in fringe-belt development: any linear feature (such as town walls, topographical features, rivers, railways, boulevards, ring roads and green belt) restricts outward growth and is likely to detective fringe-belt formation. Nineteenth-century maps reveal the burgeoning of institutions outside the town walls. Most of them are religious, but there are also a few health and military institutions. These zones form today’s inner fringe belts. The middle fringe-belts mostly developed along the new railways and outside the boulevards.

The fringe belts are determined by the perimeter around the buildings, even if fragmented are attributable to a continuous. Outside the city limits of which are determined although fragmented was continuous and it is their processuality to determine the continuity.

For the analysis of the urban fringe belts found in Kyrenia, two periods were established: 1974-1990 (Fig. 1); 2004-2010 (Fig. 2). The first period is characterized by the first urban expansions, in that time the situation was stable and under the British Empire. The development was along the main streets tangents to the historical centre which is based on the harbor. In the last periods, started the Turkish regime and there was a transition of the economy and the development of the military bases and the sprawl of the city, in downtown as well as in adjacent areas. 1st phase – 1974-1990 (fig. 1): the urban fringe belts are generating on the main street and have different sizes on the representation. They are resultant of peripheral uses of the initial plan fully implanted. 2nd phase - 2004-2010 (fig. 2): the urban fringe belts due to zoning are concentrated on the east and the west. The institutional urban fringe belts can be seen in more distant neighborhoods from the urban area in consolidation. The urban fringe belts suggested then, together, comprehend what could be call external urban fringe belts, according to the concept of M.R.G. Conzen. As we focus on the analysis on the size of urban fringe belts, we are able to notice that their greater incidence is on the east portion on Mustafa Çağatay Street, as well as on west and part of southern.
It is also clear that the urban fringe belts have randomly surrounded the central initial nucleus in every expansion period and are noticed as the urban equipments move away from the central area.

Geographers, architects and planners study these belts to seek practical applications as possible elements of urban planning and practices. Architects consider that the identification of fringe belts as elements of the dynamics of urban growth could collaborate for the development of urban policies in an attempt to use these belts as potential areas to be added to open space systems. The identification of fringe belts could be incorporated into land use laws so as to become legal instruments to guarantee the conservation of fringe belts and open spaces within the city. Fringe belts can also be incorporated into open spaces within the city and contribute to establishing a system capable of absorbing impacts caused by human actions. In an attempt to maintain the structure of this system, based on a theoretical and methodological basis of landscape ecology (Forman and Godron, 1986), the assessment of open spaces and fringe belts allows for the creation of potential ecological structures within the city. The landscape ecological planning can also contribute to the creation of a spatial solution capable of handling transformations of landscape elements, in an attempt to render human actions compatible with the capacity of ecosystems to absorb impacts as well as to maintain the integrity of the processes and life cycles (Pellegrino, 2000).

Conclusion

The task of this study is the identification of open spaces and the possible fringe belts of Kyrenia, for the present and the future perspectives for planning policies seeking quality and public management. The proposal to use fringe belts within the city serves to generate new measures to improve the identifiable characteristics of open spaces identified within the city.

Methodological procedures used in this research included the identification of public open spaces and the discovery of the existence of a system of open spaces in the city of Kyrenia considered to create a system. As the fringe belts are private spaces with low occupation density, the present study undertook to study these, bearing in mind their possible incorporation into the system of open spaces and the existing axis, which have the function of corridors or greenways. Several studies have been prepared to put this concept into practice, using the English school of urban morphology as a reference, with studies from Conzen, carried out in 1960 (Conzen, 2004 and Whitehand, 1981), as guidelines. Network
is the main characteristic of systems that enables and supports the occurrence of ecological processes and functions. The project to create corridors connecting open spaces and fringe belts may well provide the feasibility for a more sustainable system. The main objective of this work was to improve the system of open spaces to reduce the fragmentation of the landscape elements, through corridors, greenways, and new forms of connection among the existing features, such as integration among urban occupations.

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