The study of urban form in Cyprus

Nadia Charalambous
Department of Architecture, University of Cyprus, Ledras 68, Nicosia, Cyprus
E-mail: charalambousnadia@gmail.com

Nevter Zafer Cömert
Department of Architecture, Eastern Mediterranean University, Famagusta, North Cyprus, via Mersin 10, Turkey
E-mail: nzafer@gmail.com

and

Ilaria Geddes
Department of Architecture, University of Cyprus, Ledras 68, Nicosia, Cyprus
E-mail: ilaria.geddes@gmail.com

Revised version received 14 September 2018

Abstract. The history of Cypriot cities, in particular the capital, Nicosia and the main historical port of Famagusta, has been the subject of a wide variety of publications. However, the study of their urban form is relatively recent and, until the establishment of architectural schools within Cypriot universities, it has been carried out within research establishments outside of Cyprus. Consequently, urban morphological research in Cyprus is highly influenced by international schools of thought that were prevalent where researchers carried out their studies – most of them within Britain. The application of different morphological approaches is now being continued within Cypriot universities. This paper discusses how different approaches to urban morphological research have been deployed in the context of urban form studies of Cypriot cities. It reviews existing morphological studies, which date back to the 1980s, and also presents key research in related disciplines, such as planning. There is a strong focus in Cyprus on two approaches: the historico-geographical and the configurational, although typological studies also exist. Certain themes, especially relating to physical divisions and social interactions, also feature quite prominently in the literature.

Keywords: urban morphology, urban form, disciplinary history, Cypriot cities

The island of Cyprus is a small nation state which comprises six cities: Nicosia, the capital and largest urban settlement on the island, currently divided into north Nicosia and south Nicosia by a UN buffer zone, Famagusta, Kyrenia, Larnaca, Limassol and Paphos (Figure 1). Higher educational institutions in the north and the south have established and developed architectural departments over the past 25
The study of urban form in Cyprus

years. Urban design and planning education takes place within such departments, but there are few educational programmes and modules dedicated specifically to these disciplines and to the study of urban form. Analysis of urban form and education in urban issues is gradually becoming more prominent in understanding urban life and informing planning research in Cyprus. Urban municipal authorities, policy makers, urban designers and scholars are now pressed to respond to issues of urban management, such as migration flows, traffic congestion, land use distribution, increasing spatial inequalities and various design questions, including accessibility and walkability.

Urban morphological approaches

A variety of approaches to understanding urban form, both theoretical and operational, need to be deployed within research and planning practice. However, such approaches are characterized by specific national trends and separate schools of thought have emerged. This is reflected in the piecemeal teaching of different approaches at different institutions within Cyprus. The approaches that are considered within this paper are: first, the historico-geographical approach of the British school initiated by M. R. G. Conzen in the 1960s; secondly, the process typological approach of the Italian school based on the work of S. Muratori in the 1940s; and thirdly, the configurational approach developed by the space syntax community following the work of Hillier and Hanson (1984).

All the above approaches have been reviewed extensively in previous papers published in Urban Morphology (Cataldi, 2003; Cataldi et al., 2002; Kropf, 2009, 2013; Oliveira et al., 2015; Scheer, 2016; Whitehand 2001). Therefore only a brief description of each approach is given below, with a focus on recent developments in combining the approaches theoretically and practically. A fourth approach, the spatial analytical approach, is not considered because to date there are no studies using this approach in Cyprus.

The historico-geographical approach

The school of M. R. G. Conzen focuses on five aspects of urban settlements: site, function, townscape, social and economic context, and development. The townscape is said to comprise three groups of forms: the plan unit, the pattern of land use, and the building fabric. The form of the town plan is further subdivided into three elements, which make up the key physical components of urban form: the streets and their arrangement in street blocks, the plots and the buildings. Concepts
of urban development to which the historico-geographical approach gives particular emphasis are the burgage cycle, the morphological region and the fringe belt.

The morphological region has a certain consistency in its form, a unity, which distinguishes it and makes it identifiable as different from its surroundings. For Conzen, analysis of the various urban elements and the ways in which they are related aims to categorize areas into morphological regions, which have common features with respect to their form and so are distinguished from their surrounding areas (Whitehand, 2001).

Fringe belts emerge from the uneven process of urban expansion, the progress of which is defined by pauses (Oliveira, 2016). This process involves the establishment of certain land uses at the urban fringe during periods when the built-up area is stable or only growing at a slow pace. Initially, fringe belts include large open areas, public utilities and open land attached to institutions (Whitehand, 2007).

**The process typological approach**

The work of the Italian School is based on the idea of a ‘typological process’, a cumulative effect of the changing relationship between the building type and the urban fabric. It stems from the work of Muratori, who attempted to develop ‘operational histories’ of cities to provide the basis for the integration of new developments into the existing urban fabric. To do this, he attempted to develop an analytical system to interpret the process of civilization through architecture (Oliveira, 2016).

This approach was later developed by Caniggia, whose work is embedded in the normative theory of the city as an organism. He focused the analytical method on the interpretation of urban transformations in order to inform architectural designs (Cataldi, 2003). According to Caniggia, the evolution of form resulted from a dynamic process of typological transformations – the reshaping of a particular social logic expressed in the built form through various political and economic forces. The approach initially focused on investigating the areas where new developments met the older urban fabric in order to understand the progressive stratification of the built form in the city, as well as the accretions and redevelopments of the original cores of settlements.

Process typological studies take as their basis the distinction between spatial and temporal relations, which are termed *copresence* and *derivation*. The analysis of copresence uses a set of components that aggregate to form another component within a hierarchical structure.

**The configurational approach**

The configurational approach to urban morphology seeks to describe the structure of cities in terms of the relations between each space and all other spaces within a system. It proposes that space can be described independently of other factors, such as architectural styles or land-use distributions, and can therefore be given consideration as to how it relates to society. Space syntax theory and methodology represent this approach: as a theoretical model it views the structure of space as being correlated with social outcomes, in particular with the function of movement, which is seen as a product of spatial layout. As a set of analytical techniques, it attempts to assess the nature and extent of the relationship between urban space and socio-functional outcomes (Hillier, 2014).

Space syntax models the spatial structure as it is perceived and viewed by humans, as such it ‘implicitly includes the relation between humans and physical form’ (Kropf, 2009, p. 111). Space syntax tools have now long been used for the analysis of whole city structures and to identify the impact of changes in urban form on the functioning of the city, as well as relating these to socio-economic factors. Being devoid of the influence of architectural styles, geographical differences and historical periods, space syntax has proven particularly useful in identifying similarities and differences in the urban structure of cities across the world.
Combining approaches in the Cypriot context

In recent years a number of studies, initiatives and events, (Kropf, 2009; Oliveira, et al., 2014, 2015; Scheer, 2016; Zhang, 2015) have explored bridges between the different morphological approaches in order to assess the viability of a common framework and of a multidisciplinary analytical approach. While the needed comparative work on the different schools of thought has been initiated, there are still limited analyses and elaborations of how the approaches are interlinked and how they can be brought together within a comprehensive framework.

All approaches offer certain analytical benefits, but also have shortcomings, mostly relating to their ability to account for wider structural factors in their analysis of form. This is perhaps understandable as all the approaches that specifically deal with form tend to originate in the field of urban studies – more concerned with local processes – than from the field of sociology – more concerned with global processes. This is of particular relevance in the Cypriot context since major historical events and relations with foreign countries, such as the past British colonial status of Cyprus and the war in 1974, have been shown to have major impacts on the form of Cypriot cities (Geddes, 2017).

In combining the approaches within a framework suitable for the Cypriot context it is necessary to assess the common ground on which the approaches could be combined. In the case of Famagusta and Nicosia, the historico-geographical approach has been applied and the cities analysed by understanding the forms of their traditional cores as an aid to improving conservation and development plans of historical cores from a Conzenian perspective. The process typological approach has also been applied to these cities by analysing their forms and processes of change from a Caniggian perspective. Kropf (2001) highlights that the Italian and British schools share the common notion that different kinds of change go through formative and transformative processes. However, the Italian school has focused on the process of change from one type into another, but the British school has given less attention to the process whereby one morphological period changes to another. This leaves scope for exploring links between the Conzenian morphological period and the Caniggian typological process’ (Whitehand, 2001, p. 107). In addition, the historico-geographical and the configurational approaches offer potential to address comprehensively morphogenetic processes that have been identified by previous research (Geddes, 2017). An overview of the common features and differences is provided in Table 1.

Clearly, there is no single aspect that is common to all the approaches, although different components and relations tend to occur in two or more approaches. As Kropf points out, all physical aspects can be seen as ‘co-dependent facets of the same phenomenon’ (2009, p. 117). Function and use are clearly the social aspects that are consistently adopted for analysis. Although these do not explicitly feature in process typological analysis, they are implicit in its conception of building type, which is specific to meeting certain functional and cultural requirements within a historical context.

Different scales and degrees of determinism are clear in the variety of views of the human-physical relationship offered by each approach. Here it seems that the lack of an overarching theoretical framework that establishes the extent to which different local and structural processes, and bottom-up and top-down interventions, should be given consideration in analytical attempts, gives rise to different views of the relevance and direction of the linkages between human and physical components. However, temporal relations seem to be the most consistent across the approaches (though using somewhat different semantics): cyclical/continuous processes, and change, modification or diversification are compatible descriptions of morphogenesis and urban transformation.

It is not the spatial relations among the physical elements that are descriptive of the processes of transformation, but rather
Table 1. Components of urban form and their relationships in the different urban morphological approaches

<table>
<thead>
<tr>
<th>Approach</th>
<th>Physical Features</th>
<th>Social Features</th>
<th>Spatial Relations</th>
<th>Human/Physical Relations</th>
<th>Temporal Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historico-Geographical</td>
<td>• Site</td>
<td>• Function</td>
<td>• Street pattern</td>
<td>• Social and Economic context</td>
<td>• Cyclical change</td>
</tr>
<tr>
<td></td>
<td>• Town plan (street, plot, building)</td>
<td>• Land-use pattern</td>
<td>• Plot pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Building pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Typological</td>
<td>• Building context</td>
<td>• Cultural context</td>
<td>• Aggregation</td>
<td>• Intention</td>
<td>• Derivation (cyclical reproduction, modification of form)</td>
</tr>
<tr>
<td></td>
<td>• Urban tissue</td>
<td>• Historical context</td>
<td></td>
<td>• Construction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• District</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• City</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Configurational</td>
<td>• Street</td>
<td>• Use</td>
<td>• Network structure</td>
<td>• Perception</td>
<td>• Cyclical growth</td>
</tr>
<tr>
<td></td>
<td>• Open space</td>
<td>• Occupation</td>
<td>• Interconnection</td>
<td>• Movement economy</td>
<td>• Diversification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Movement</td>
<td></td>
<td>• Cultural context</td>
<td></td>
</tr>
</tbody>
</table>

The study of urban form in Cyprus and Iacovou (1989) illustrate the urban forms of Famagusta and Nicosia over various periods.

The first trigonometrical survey of the island was carried out at the beginning of the British administration by Lord Kitchener (Rodney, 2001). This includes town plans of the cities, an example of which is shown in Figure 2. This provides the first set of accurate cartographic data, which was finalized in 1883.

Another three series of town plans were produced under the British administration. These comprised cover of all cities in 1933, a series covering Nicosia, Limassol and Famagusta produced between 1955 and 1959, and finally a series produced in 1974.

The Cypriot Department of Land and Surveys produced their first series of maps in the late 1960s. These maps are no longer available in Cyprus, but can be accessed at the American Library of Congress. A series covering cities in the southern part of Cyprus was produced in the late 1980s and again in the early 2000s at a scale of 1:7500. Paper cadastral maps and a digital version of parcel maps dating from 2003 are also available from the Department of Land and Surveys. Scanned maps, cadastral plans and digital data have

Cypriot cartographic data

There is a paucity of historical and archaeological information on the form of Cypriot settlements. Cartographic information is also relatively scarce. In their history of the cartography of Nicosia, Stylianou and Stylianou (1989) include maps that have been used to analyse the form of the city prior to the availability of modern maps. Between 1984 and 1989, the Bank of Cyprus collated maps from different periods, and Hadjipaschalis

the temporal relations. A broader framework under which the approaches can be combined should be considered for the Cypriot context in order to include both types of components, to refine the ways in which both structural and local factors are linked, and to make the most of the temporal processes already identified by previous analyses. However, such a framework is beyond the scope of this paper, requiring further empirical research on Cypriot cities. The first step towards achieving this lies in the remainder of this paper, which reviews existing research upon which comparative and multidisciplinary studies can be built.
been made available since June 2016 through an online portal. A series covering cities in the late 1990s and 2000s at the scale of 1:5000, digital scanned cadastral maps from the Department of Land and Surveys and a digital version of parcel maps dating from 2010 have also been produced for the northern part of Cyprus.

**Types of studies**

Historical studies of the urban form of Cypriot cities are rare. The traveller Cobham (1908) offered observations on the lifestyle of Cyprus, and also provided indirect descriptions of urban form. Kitchener’s work is the first systematic assessment of the form of Cypriot cities (Rodney, 2001). Despite the existence of this early topographical research and historical reviews of the process of city building, the first studies with a clear morphological dimension were carried out as recently as the late-twentieth century. These include historical, morphological, configurational and typological studies. At the same time a number of comparative studies and analyses focusing on planning and sustainability have been undertaken.

**Historical studies**

Publications on the history of Cypriot cities appeared in the late 1970s: for example, Pilavakis’s _Limassol in another age_ (1977) and Katselli’s _Kyrenia, a historical study_ (1979). These tend to have a historical focus on the cities’ socio-economic development and their monuments, rather than attempting any description of their urban form. It was not until the 1980s that there were attempts at systematically describing the development of any city, not just from a social and historical perspective.
The study of urban form in Cyprus

point of view but also dealing with its physical form. Most early studies focus on the capital of Nicosia. Attalides (1981) published a comprehensive description of urbanization and social change in Nicosia from the Ottoman period until the war of 1974. The focus is on three periods of study in terms of significant developments in town-country relations: the end of the Ottoman administration (the period before 1878); the British administration up to 1938; and the Second World War and post-war period. It includes a series of maps describing various aspects of the ecological structure of the city. The map depicting the growth of the city is shown in Figure 3.

Historians and art historians have tended to cover cities across the whole island. Marangou and Severis published a series of books on the history of various cities and on historical travellers' records and artists' depictions of the city (Marangou, 2005a,b, 2011; Severis, 2005, 2006, 2008, 2009, 2011). A series of books focusing on Cypriot cities under the series title of The history of my city, covering a wide range of themes from social, economic and industrial development to architecture and planning, was released by the publishing house of the Cypriot newspaper Fileleftheros in 2012.

Historico-geographical studies

Architects and planners developed morphological studies in Cyprus within the urban historical strand of research. Methodologically, morphological analysis in Cyprus has been strongly influenced by the historico-geographical approach of the British School. A number of studies were undertaken by researchers based in northern Cyprus with links to British work on town-plan analysis.

Revitalizing the historic walled city of Gazimağusa (Doratlı et al., 2001) was the first morphological study to deal with the historical process of urban development. It explored how the urban layout had been changed by new construction, and analysed different authors’ ‘narratives’ of Famagusta. Önal et al. (1999) revealed the urban problems of Famagusta and examined how urban form changed with the influence of different urban dynamics within planning. Two papers (Doratlı, 2011a; Doratlı et al., 2001) and an unpublished PhD thesis (Doratlı, 2000) presented similar analyses of particular periods in Nicosia and Famagusta, focusing on the revitalization of historic urban quarters. A model that offers a solution for the economic, physical and social obsolescence

Figure 3. Growth of Nicosia, 1932–1968 (from Attalides, 1981)
of the historic centre has also been proposed (Doratlı, 2011b).

Townscape analysis was first used by Zafer (2004), for the investigation of Famagusta’s walled city by means of the historico-geographical method. Her PhD (Cömert Zafer, 2013) assessed Conzenian and Caniggian methods, which form the basis of morphological studies on towns of medieval origin. It synthesized Conzenian (historico-geographical) and Caniggian (typological process) approaches and clarified the research design of cases in discussions of the old towns of Famagusta and Ludlow. Cömert Zafer and Hoskara (2013) applied this integrated methodology in the first industrial mass housing district in Lefke and tested whether this method was applicable to the other cities. Çömert Zafer (2015) also applied the concept of morphological regions in the traditional core of Lefke. This was the first study that defines morphological regions in terms of the interrelationship of land utilization, plan units and building types in the northern part of Cyprus. The fringe-belt concept was also used by Çömert Zafer and Tursoy (2015) to analyse the development of Famagusta’s fringes using the Conzenian approach. More recently, Camiz and Bruccoleri (2016) analysed how urban fringes in Kyrenia were transformed by wider political changes.

Configurational studies

The application of the configurational approach within Cyprus was influenced greatly by work at University College London (UCL). Following the PhD thesis by Vassiliadou (1982), several studies undertaken there focused on cities in the southern part of the island. This work was on either Limassol (Kritioti, 1988) or Nicosia (Charalambous, 1992; Kypris, 1994; Parpa, 2010). The large amount of work on Nicosia carried out by the space syntax laboratory at UCL led to the use of Nicosia as the exemplary case study of configurational differences in the residential urban form of different ethnicities and cultures (Hillier, 2002). At the same time, research on division and regeneration focusing on Famagusta, Kyrenia and Nicosia was carried out within the same institution by Aknar (2009) and Bilsel (2009). More recently, studies featuring diachronic configurational analyses of Limassol and Nicosia have been published. Of these, one assessed the development of commercial high streets in Limassol, combining land-use analysis with configurational analysis (Charalambous and Geddes, 2015a). Another combined social analysis with configurational analysis in Nicosia and assessed how the spatial structure of the city relates to the persistence and change of social distributions in the capital (Charalambous and Geddes, 2015b).

In recent years a number of studies have explored bridges between configurational and other approaches. Edgü, Taluğ and Özgece (2015) used a configurational approach to explore consumer behaviour on the divided high street of Nicosia. They assessed how users behaved on Ledra and Girne streets, which formed a continuous axis before the division of Cyprus and have similar physical form characteristics. Zafer Cömert and Özgece (2017) provided a basis for identifying morphological regions that could be applied in different geographical regions. They also explored integrated and segregated areas in traditional urban settings using space syntax and townscape methods. Aknar and Atun (2017) compared space syntax and Fibonacci measures as a basis for planning guidelines for vacant sites in Nicosia. Geddes’s PhD thesis and related conference papers provide an overview of Limassol’s urban transformation. They combine configurational, historico-geographical and social sciences methods to provide a comprehensive analysis of the city’s development as well as addressing wider questions about morphogenetic processes in cities (Geddes, 2014, 2017; Geddes and Charalambous, 2017).

Typological studies

A significant analysis in Cyprus by Dağlı (1995) deals with the typological assessment of Famagusta old town. She produced a model
that aids understanding of the historical townscape by analysing the typological processes of historical buildings. She proposed a typological analysis of new buildings in historic city centres. She constructed a model for elucidating the typological process of buildings in historical quarters.

Demi (1997) conducted a significant typological study of urban form in Nicosia, deploying methods of the Muratorian school to analyse the old city. He used a typological process method to evaluate the Nicosia walled city under the revision of the Nicosia Master Plan with the collaboration of United Nation Project Offices. In his book, he assessed the relationship of buildings to territory at three different scales: the city, the neighbourhood and the street/square, from Roman to contemporary times. Within his study, he also proposed a set of typological guidelines for use in planning control and development implementation.

Urban form, planning and sustainability

Planning studies were carried out in various cities in which consideration was given to different aspects of planning regimes and policies, such as the potential of a unified Nicosia Master Plan (1979–1984); the relationship between urban land distribution and planning policies (Zetter, 1985); the impact of large infrastructure projects in Larnaca (Savvides, 1990); elements of sustainability and waterfront renewal in Limassol (Gerasimou and Georgoudis, 2011); a review of the planning context and development status of Nicosia in a study carried out by the Department of Town Planning and Housing as part of a European COST Action (Demetriou, 2004); and an evaluation of the identity of urban form of the northern part of Nicosia in relation to planning (Oktay, 2007).

The Eastern Mediterranean University’s Urban Research and Development Centre carries out research on urban form and sustainability in the northern part of Cyprus. In 2002, an interpretative approach was developed and tested in the city of Kyrenia, to evaluate how the urban context affects urban identity and how this identity can be maintained through sustainable policies. This was published by Oktay (2005) with a focus on EU sustainability policies and urban issues within the divided context of Cyprus. Oktay evaluated the sustainability of urban form with reference to EU policies on urban design and suggested ways to improve and sustain the quality of urban form through policy.

Alpar (2004) developed a model of regeneration aimed at achieving sustainability through the process of urban integration in Nicosia. Her study aids the understanding of urban achievements and failures in order to derive significant clues for urban regeneration objectives. She proposes a multidisciplinary approach integrating various factors such as social, economic and physical development to address sustainable restructuring processes of divided and fragmented cities.

Current developments in Cypriot urban morphology

A number of Cypriot and international researchers are currently working on urban form in Cyprus and have started teaching the subject of urban morphology within Cypriot universities, in particular at Eastern Mediterranean University, Girne American University, Cyprus International University, Neapolis University of Paphos and the University of Cyprus. Many such researchers have settled in academic positions following years of training or academic and professional work in other countries, such as Greece, Italy, Turkey and the UK. They bring with them expertise in the various urban morphological approaches, having completed studies within the institutions where the various urban morphological approaches were developed in Italy and the UK.

Researchers at the Eastern Mediterranean University focus on regeneration, sustainability and liveability in the cities of Kyrenia (Oktay, 2002, 2006; Oktay et al., 2003) and Famagusta (Dorath et al., 2001; Hoskara et al., 1999; Rafiemanzelat and Oktay, 2016), and on
## Table 2. Summary of research on Cypriot cities

<table>
<thead>
<tr>
<th>Approach</th>
<th>Research Field</th>
<th>Research Area</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cartographic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stylianou and Stylianou</td>
<td>Illustrative mapping</td>
<td>Historic city</td>
<td>Nicosia</td>
</tr>
<tr>
<td>Mikkis and Michaelidis</td>
<td>Illustrative mapping</td>
<td>Historic city</td>
<td>Nicosia and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Famagusta</td>
</tr>
<tr>
<td>Kitchener</td>
<td>Trigonometrical survey</td>
<td>All cities and towns</td>
<td></td>
</tr>
<tr>
<td><strong>Historical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilavakis</td>
<td>Process of socio-economic urban assessment of monuments</td>
<td>Traditional Core</td>
<td>Limassol</td>
</tr>
<tr>
<td>Kastelli</td>
<td>Process of socio-economic urban assessment of monuments</td>
<td>Traditional Core</td>
<td>Kyrenia</td>
</tr>
<tr>
<td>Marangou and Severis</td>
<td>Historical assessment of social, economic, and architectural planning</td>
<td>Various Cypriot cities</td>
<td></td>
</tr>
<tr>
<td><strong>Historico-Geographical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doratli et al.</td>
<td>Process of urban growth</td>
<td>Walled town</td>
<td>Famagusta</td>
</tr>
<tr>
<td>Doratli, Önal and Dağlı</td>
<td>Urban growth</td>
<td>Whole city</td>
<td>Famagusta</td>
</tr>
<tr>
<td>Doratli</td>
<td>Urban conservation</td>
<td>Historic urban quarters</td>
<td>Nicosia and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Famagusta</td>
</tr>
<tr>
<td>Zafer</td>
<td>Townscape analysis</td>
<td>Walled town</td>
<td>Famagusta</td>
</tr>
<tr>
<td>Cömert</td>
<td>Townscape analysis and typological process</td>
<td>Walled town</td>
<td>Famagusta</td>
</tr>
<tr>
<td>Cömert and Türsoy</td>
<td>Fringe-belt development</td>
<td>New development areas</td>
<td>Famagusta</td>
</tr>
<tr>
<td>Cömert and Hoşkara</td>
<td>Townscape analysis and typological process</td>
<td>Industrial mass housing district</td>
<td>Lefke</td>
</tr>
<tr>
<td>Cömert</td>
<td>Morphological regions</td>
<td>Traditional core</td>
<td>Lefke</td>
</tr>
<tr>
<td>Camiz and Brucoleri</td>
<td>Fringe belt</td>
<td>New development areas</td>
<td>Kyrenia</td>
</tr>
<tr>
<td><strong>Configurational</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charalambous and Geddes</td>
<td>Land-use analysis and configurational analysis</td>
<td>Commercial street</td>
<td>Limassol</td>
</tr>
<tr>
<td>Geddes, Geddes and</td>
<td>Morphological process and configurational analysis</td>
<td>Whole city</td>
<td>Limassol</td>
</tr>
<tr>
<td>Charalambous</td>
<td>Social analysis with configurational analysis</td>
<td>New development areas</td>
<td>Nicosia</td>
</tr>
<tr>
<td>Charalambous and Geddes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edgü, Taluğ and Özgece</td>
<td>Configurational analysis</td>
<td>Commercial street</td>
<td>Nicosia</td>
</tr>
<tr>
<td>Aknar and Atun</td>
<td>Configurational properties and Fibonacci measures</td>
<td>New development areas</td>
<td>Nicosia</td>
</tr>
<tr>
<td>Cömert and Özgece</td>
<td>Configurational analysis and morphological regions</td>
<td>Walled town</td>
<td>Famagusta</td>
</tr>
<tr>
<td><strong>Typological</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dağlı</td>
<td>Typological process, architectural types</td>
<td>Walled town</td>
<td>Famagusta</td>
</tr>
<tr>
<td>Demi</td>
<td>Typological process, territorial configuration and urban tissue</td>
<td>Old town</td>
<td>Nicosia</td>
</tr>
<tr>
<td><strong>Urban Form, Planning and Sustainability</strong></td>
<td>Land utilization and planning policies</td>
<td>Whole city</td>
<td>Nicosia</td>
</tr>
<tr>
<td>Zetter</td>
<td>Social, physical and economic analysis on sustainable restructuring process</td>
<td>New development areas</td>
<td>Nicosia</td>
</tr>
<tr>
<td>Alpar</td>
<td>Urban identity and sustainable policies</td>
<td>New development area</td>
<td>Nicosia and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kyrenia</td>
</tr>
<tr>
<td>Oktay</td>
<td>Identity and urban renewal</td>
<td>Waterfront</td>
<td>Limassol</td>
</tr>
<tr>
<td>Gerasimou and Georgioudis</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the division in the city of Nicosia (Alpar Atun and Doratlı 2009; Oktay 2007; Öngül 2012). Similar work is being undertaken by Cypriot and international researchers within the wider context of divided cities (Bollens, 2001; Calame and Charlesworth, 2012; Papadakis, 2006). There is also a focus on the historico-geographical approach (Camiz and Bruccoleri, 2016; Zafer, 2004), and these researchers have started combining this with the process typological approach (Zafer, 2016). A strong focus on configurational approaches has been developed by researchers based in the south, mainly at the University of Cyprus, where they have also started combining this approach with the historico-geographical approach, as well as social sciences methods (Charalambous and Geddes, 2015b; Geddes, 2014, 2017). So far, except for extremely basic forms of spatial analysis (Charalambous and Geddes, 2015a, b; Geddes 2017), there are no urban morphological studies of Cypriot cities using the spatial analytical approach. Table 2 summarizes the existing key studies within different fields and the application of different approaches.

The bi-communal Cyprus Network of Urban Morphology (CyNUM) was initiated in 2015. In addition to promoting research and dissemination of findings on the urban form of Cypriot cities, the network also aims to provide a platform for knowledge exchange among researchers based in different universities within Cyprus and abroad. As part of these exchanges, seminars disseminating findings on cities in the north and south using different approaches have taken place.

An Erasmus+ strategic partnership on urban morphology was initiated in November 2017 by the University of Cyprus. The research project on Emerging Perspectives in Urban Morphology – researching and learning through multiple practices (EPUM) – brings together a number of institutions that have long-standing expertise in urban morphology, including Sapienza University, the University of Porto, Space Syntax Limited and Vienna Technical University (http://epum.eu; Charalambous and Oliveira, 2018; Oliveira and Charalambous, 2018).

Although the number and scope of studies on the urban form of Cypriot cities with a strictly morphological focus remains limited, the field of urban morphology is clearly developing rapidly within Cyprus, especially if one takes into account the size of the country and the young age of the architectural departments of its universities. Given the expertise of the researchers who are leading this work in Cyprus, there is clearly a potential to develop further not only studies making use of the historico-geographical and configurational approaches, but also to develop a stronger strand of process typological studies, and comparative and multidisciplinary research projects.

Since expertise has been exchanged and studies using similar approaches have been undertaken across various cities, there will be major opportunities for more comparative studies of cities.

References


Doratlı, N. (2011b) ‘Questioning the walls between the Turkish and Greek Cypriots’, unpublished paper presented to the 2nd Island’s Dynamics Conference, Valetta, Malta.


Katselli, R. (1979) Kyrenia, a historical study (Kyrenia Flower Show, Kyrenia).


The study of urban form in Cyprus


