Testing an Integrated Methodology for Urban Typo-morphological Analysis on Famagusta and Ludlow

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Introduction

Urban morphology is a system comprising many disciplines, and it falls within the interests of different professions such as architecture, geography, philosophy, archeology, anthropology, history and ethnography. In the scope of this thesis, only architectural and geographical dimensions of urban morphology will be discussed. Whereas certain architectural and geographical dimensions of urban morphology address physical issues, others focus on social and cultural issues. Additionally, it is not possible to review all approaches from different disciplines within the scope of this thesis. This thesis will focus on the geographical and architectural dimensions of urban morphology in Europe, United States, China and Japan because a review of the literature reveals that most urban morphological research has been conducted in these countries.

However, investigating the uniqueness and richness of places, as opposed to an abstract and constrained approach, makes it possible for urban morphological research to connect with people’s daily experience and to incorporate such experience in plans and designs. By analyzing the context of urban environments, researchers and designers are responsible for ordering and processing this information using their skills and general knowledge. McLoughlin (1969, p. 45) defined the study of urban morphology as a way of introducing the element of form in planning processes by removing that element from the realm of arbitrariness. The methodological approach links to methodical approaches in planning without disregarding the non-rational aspects of form. This approach makes it possible to discuss the form of towns based on morphological methods. In addition, morphological analysis plays an important role in the development of conservation plans.

Various definitions of urban morphology have been suggested by researchers in different disciplines. For example, Moudon (1997, p. 3) describes urban morphology as “the study of the city as human habitat”. Levi Strauss (1954, pp. 137-138), who is a sociologist, describes the city as “the most complex of human inventions, ... at the confluence of nature and artifact.” There are many definitions of urban morphology, but there is one that several authors, including Clark (1985), Small &Witherick (1986), and Goodall (1987), agree on. Thus, the common definition of urban morphology is that it consists of the study of the form, shape, plan, structure and functions of the built fabric of cities or towns and is concerned with the historical development of this fabric over time.

According to Vance (1990), urban morphology or city form tends to change in response to the context of city development over time. Thus, the study of urban morphology involves examining not only existing the physical elements of a city but also their evolution over the course of history.

Using more primary resources, Gordon (1984, p. 3) and Onal et al. (2003, p. 428) concur that a city’s morphology involves plots, buildings, use, streets, plans, and townscapes. There is agreement that the city or town can be read and analyzed through the medium of its physical form. The study of morphology focuses on the history of variation in form (first used in 1885).
by Goethe (Wilkinson & Willoughby, 1962). It is important to the use of morphology as a tool for analysis that it is not only about form. In serious urban design, form may never be viewed without considering its context: the meaning attached to it, its relationship to use, the process of transformations that characterize it, and its relationship to the urban process.

In 1996, morphologists from different disciplines such as geography, architecture, sociology, history and planning established the International Seminar on Urban Form (ISUF), an organization that acknowledges the expansion of urban morphology as an emerging interdisciplinary field. ISUF aims to provide a platform for the exchange ideas, theories and information about projects among a wide range of readers. Pioneers of morphological studies G. Caniggia and MRG Conzen have provided guidelines and established a method for morphological analysis in a systematized way. Caniggia analyzes the urban form in an inductive way, whereas Conzen takes a deductive approach. Both methods have certain shortcomings. Caniggia’s approach is to begin with the smallest component of the building, followed by a method that associates the building with the city as a whole. This method has certain problems with generalized application because the smallest components and elements of a building may not be classified in the same way in different geographical regions. A building’s elements and components are changed according to local characteristics, which can be unique to a region. In contrast, Conzen’s approach is to begin with the whole city on a geographical level and then move down to the building scale. Again, some elements of analysis are not easily applied everywhere because of the strong influence of borders, regions, hierarchies and locations. Conzen’s analysis does not address building elements and components in as much detail as Caniggia’s approach.
Aim, Objectives and Question of the Research

In different geographies associated with different cultures or civilizations, unplanned developments in historical and contemporary areas can result in incompatible morphological forms, especially in medieval towns. Typomorphological analysis helps in understanding the urban form and presents an opportunity for a wide range of design or planning strategy. This type of analysis also helps to determine the conservation plans or strategies of towns that reveal clues to their own history. Such analysis methods are a process that reviews the evolution and evaluation of towns throughout history. M.R.G. Conzen and G. Caniggia performed urban morphological studies of European cities, providing an opportunity to compare the results of both authors’ approaches on the European continent.

However, it is unknown whether either method can be used outside of Europe. Moreover, there is no town in which the two methods have been applied simultaneously. Accordingly, the research question becomes: “How would it be possible to suggest a synthesized method through integrating the Conzenian and Caniggian methods for typo-morphological studies?”

The main aim of this study is to develop an integrated method based on Conzenian and Caniggian theoretical frameworks. The study is a theoretical attempt to formulate a synthesized methodology for typo-morphological analysis. In this paper, this methodology is applied to two cases comparatively to verify the effectiveness of the method.

A literature survey of Conzen’s and Caniggia’s methods for morphological analysis reveals that these methods have not been used in all geographical regions because the elements and components of the methods are applicable...
only to Europe, the United States and China. Thus, the major objective is to conduct research on the two methods to establish a base for an integrated urban morphological method that will be applicable to different sites throughout the world. This approach provides an opportunity to understand the urban form more clearly.

It is hoped that the proposed method of analysis of urban form according to a morphological approach will help designers, planners, cultural geographers, urban morphologists, typologists, and historians find better solutions while they are designing, analyzing, planning or conserving cities, urban areas or districts worldwide.

Research Methodology

The method of the study is based on two parts: a documentary survey and a case study. The first part of the study is derived from a documentary survey. The study attempts to define the problem by exploring why typomorphological studies are necessary to measure the structure of cities. Why do we need this analysis? How should we approach analysis and design in the urban context? Next, the research will bring detailed reviews and surveys in response to the question put forward and will investigate the aims and objectives of the study. After a review of the issues and relevant sources, the study aims to establish the basis of the theory of the thesis.


G. Caniggia’s works have been reviewed in the book “Interpreting Basic building Architectural composition and building typology” Caniggia G., Maffei G., 2001, Alinea Editrice, Firenze, Italy. Few primary sources in English are available for Caniggia’s work, and most are in Italian.

Another issue is a review of the discussions from the perspectives of different disciplines. These reviews are found in issues of the International Seminar on Urban Form (ISUF) and the Journal of Urban Morphology, established in 1996. Finally, the cultural, political and economic backgrounds of the selected cases from historical sources are examined. One of the cases is Famagusta, for which the historical sources are reviewed from both primary and secondary sources. Primary sources from the national archive in North and South Cyprus and secondary sources from several books and articles are reviewed. The other case is Ludlow, for which historical sources are reviewed from primary and secondary sources as in the Famagusta case. Primary sources from the Ludlow library and secondary sources from books and periodicals related to Ludlow are reviewed. All of these surveys help to establish the theory of the thesis.

After the documentary survey, this thesis aims to develop an integrated method of both the Conzenian and Caniggian approaches to compare and synthesize them.

The second part of the study is the case study. This part is composed of two sections: a literature survey to understand the historical backgrounds of towns and a site survey for measuring the data of the cases. The literature to be surveyed for the case study related to the historical backgrounds of the towns is selected from primary and secondary sources from archives, books, journals and articles. Data collection on sources has been reviewed
Fig. 3 - Illustration of structure of building with material.
Sources: author’s drawings, 2013.

from primary sources collected from the national archives. In addition, maps and drawings for Ludlow were collected from the M.R.G. Conzen collection at Birmingham University, and ordinance survey maps were also collected from the Ludlow City Council. Maps and drawings from Famagusta were collected from the North Cyprus City Planning Department and Land Register Office and Mağusa Municipality.

Site surveys based on the theory enable testing of the method with data collecting through morphological studies. The comparative longitudinal case study method was selected for analyzing and comparing the selected cases. One of the aims in choosing this method was to determine whether the integrated method can be applied to the selected cases. The comparative case study method was chosen, according to the urban morphological point of view and approaches, especially those of M.R.G. Conzen and G. Caniggia, that emerge from a careful consideration of data that those particular cases provide: Ludlow in the U.K. and Famagusta in North Cyprus. These cases were intentionally chosen from different countries to provide a rich discussion of urban morphology and its methods to test whether the integrated method could be applied in different geographies with different cultures. Examples were selected according to their equivalent time spans, functional similarities, similar fringe belts and natural characteristics in different geographies.

The necessary photographs and digital drawings are the author’s own. Illustrations used in this thesis were gathered from various books and from the collections.

Some of the data for the cases were collected from primary and secondary sources and reviewed as desk work, and some of the data were taken from the site surveys during the site survey, especially in the case of physical analysis.
Limitation of the Study

This study has some limitations. In this study, the physical dimensions of urban morphology have been considered. Because each dimension could be a research topic in itself, natural, social, economic, and ideological determinants of urban morphology are excluded in this thesis. Another issue is the selection of cases. In this thesis, only Conzen’s work, and not Caniggia’s, is selected as a case for comparison. Thus, when cases are selected, the towns in Italy that were Caniggia’s focus are excluded. One reason for this selection process is the language of the documents; Caniggia’s work is primarily written in Italian. Therefore, cases from Italy are omitted in the scope of this thesis. In addition, typomorphological approaches throughout the world are not reviewed in this thesis; only European approaches are reviewed because the selected cases are located in Europe.