

Territories and Frontiers in Inconclusive Concepts within the Schools of Urban Morphology

by Staël de Alvarenga Pereira Costa, Maria Cristina Villefort Teixeira,
Maria Manoela Gimmler Netto & Henrique Vianna Lopes Teixeira
Federal University of Minas Gerais

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Abstract: The results of a research project entitled Territories and frontiers in inconclusive concepts within the schools of Urban Morphology are the principal object of this paper, due to the fact that they have remained poorly developed and neglected in the field. As such, the approaches of the English School, with regards to morphogenetic regions and their scales of action will come under particular examination. In addition, concepts generated by the Italian School such as type and the territorial type also form part of this research. The central aim is, therefore, to understand the lacunae and the causes of this conceptual fragility so as we may consolidate and better employ such concepts in our research projects. A complimentary comparison of the similarity or incongruity of landscape units, examined together with morphogenetic regions and territorial type, should establish a basic concept that can be applied productively to all elements. Finally, a further investigation of the Brazilian reality may offer the opportunity to decode and transmit the findings, which could be used in research developed by interdisciplinary teams participating on Master's and Doctoral programmes.

1. Introduction

The motive that prompted this research was the difficulty in utilising some concepts of the traditional schools of urban morphology, due to lacunas found during application in either teaching or practice. Concepts generated by the Italian School such as type and territorial type, allow different interpretations as a result of the difficulties in establishing a common and concrete idea. In addition, morphogenetic regions and their scales of action are central to this particular examination due to the difficulty in establishing the boundaries between them.

Moreover, a current tendency for students, on postgraduate courses, is to extend morphological approaches into broader territories. Thus, there is a contemporary need to incorporate the concepts of landscape units, disseminated in the field of ecology, in a morphological investigation of the Brazilian scenario. The findings from such a merger between morphological and ecological concepts may then be usefully incorporated in research developed by interdisciplinary teams participating on Master's and Doctoral programmes.

The surveys manifesting this merger are consequently related to the dual themes of urban planning and the sustainability of landscapes, both in their theoretical and practical aspects

and, as such, should be of central consideration in public policy formation. It is important to note that these themes are being developed in the context of the Multidisciplinary Postgraduate Program on the Built Environment and Sustainable Heritage (PACPS) offered by the School of Architecture at the Federal University of Minas Gerais.

The observation that the approaches of the English School of Urban Morphology, concerning morphogenetic region and scale, has given rise to the tendency for studies, discussions and practical applications that address the obvious lacunae within the concepts. Moreover, aspects referring to types and the territorial type, all integral to the approaches of the Italian School of Urban Morphology and its founders, have been the object of differentiated interpretation in Brazilian studies. For a research laboratory team that has, as one of its main objects, the study of Urban Morphology and its application in the Brazilian context, this discussion and deepening of the theme is considered crucial.

Concepts referred to as "unfinished business" raise the question of whether ideas have been fully explored and developed by researchers. Such possible lacunae can be explained, either by the decease of one of the founders, Muratori, or the fact that the other, Conzen has only more recently been rediscovered. Taking these key points into consideration, the next step was to acquire solid notions in order to understand the hidden ideas and possible approaches to be used in case studies and other possible applications. The most feasible action was to try to understand such ideas through examples presented in previous studies which were the main object of our chosen methodology. The final objective is to disseminate the results on postgraduate courses and thus contribute to the enhancement of planning policy in Brazilian cities.

2. The adopted methodology

The methodology primarily utilised secondary sources all related to the literature associated with and developed by, the founders and their followers. This included a survey of various bibliographic sources which enabled a better understanding of the concepts. This first phase was followed by a practical exercise, which aimed to apply the concepts and ideas to real contexts, such as, the colonial town of Tiradentes, located in the state of Minas Gerais, Brazil. This allowed us to test, compare and analyse the precepts in relation to the surveyed aspects of an urban site.

3. Methodological Tools

In order to avoid individual interpretation of concepts and cause misunderstanding, the Landscape Laboratory put forward some strategies to develop the research. A 45-hour weekly course, designated for teachers, under and post-graduate students, was set up to acquire the relevant literature on the subject. Texts would be sent in advance to the participants for everyone to read, so as air any doubts and discuss differing interpretations in the class. This strategy has been used in the Laboratory as a way of consolidating ideas and approaches over a number of years. Firstly, there is a reading session regarding a course subject, followed by a discussion which attempts to condense the concepts into a tool named CMAP. This is formed by diagrams which exemplify the synthesis of the researched object. In addition to this, doctoral students need to find a territorial type that can bring together all features to be used in the model for analysing contemporary landscapes on the city borders.

Some texts on urban morphology that contemplate the whole methodology were the first to be used to make under-graduate students, who have never been acquainted with the subject, familiar with the concepts. Bearing those aspects in mind the followings texts were chosen to broaden the concept of type and territorial type.

In terms of Italian Urban Morphology, the first text analysed was by Saverio Muratori and the School of Planning Typology (Cataldi *et al.*, 2002) as it gives a general conception of the founder's practice and teaching. A discussion on type, and the difficulty of using the term with the correct application was consequently covered in the texts (Pereira, 2012; Panerai, 1988; and Scheer 2015). Having achieved an understanding of the complexity of defining types the next subject was related to territorial types.

The territorial organism as individuation of typical connections, between routes, productive settlement and urban organism (Caniggia et Maffei, 2001) had already been the object of studies in the Laboratory with various interpretations appearing in a number of Master's dissertations.

The next step in the course was designed to cover recent studies and books by Italian teachers and students that have addressed unfinished concepts in geography. In particular, the theme has been the object of Marzot's analysis, (2015) in which he cites the works of Giannini, 1984. Cataldi, 2013 and Lombardini 2017. According to these authors, such studies note the observations made by Muratori in 1967 and which, are further embodied in a number of drawings and sketches, all of which encapsulate aspects related to features of the landscape. Giannini, his pupil, used these drawings to present an initial theory related to such features and applied them to studies done in Africa, China and Italy, (1984).

Finally, a PhD thesis, developed by Tagliazuchi in 2013, was the last work on territorial types examined in class. As such, Cataldi and Giannini's studies were used to develop her own interpretation regarding territorial types. However, what such studies clearly demonstrate is that a personal interpretation of a drawing executed almost fifty years ago fails to be compelling proof of what Muratori really had in mind. Essentially, this leaves Urban Morphologists free to speculate on concepts. Moreover, as these references were written in Italian it was not always easy to fully understand the concept and to consider if it could be applied in a doctoral thesis as a method which incorporates use of the territorial type.

Contrastingly, with reference to the unfinished concepts in the English School of Urban Morphology, the founder left space for many possible ambiguities when referring to the morphological or the morphogenetic regions. Whitehand (2015) when referring to these in an interview with Oliveira, commented that Conzen had explored them in studies on several scales. The most relevant studies included those on Ludlow, Alnwick and Newcastle Upon Tyne. As such, these formed the basis of class discussion together with Gu (2019) Whitehand (2009) and Oliveira (2015).

This first phase was followed by a practical exercise during classes, which aimed to apply the concepts and ideas to real contexts, such as, the colonial town of Tiradentes located in the state of Minas Gerais, Brazil. This allowed us to test, compare and analyse the precepts in relation to the surveyed aspects of an urban site. The final step will be to test the concepts on the above-mentioned town.

4. A discussion of the unfinished concepts of the Italian School of Urban Morphology

Studies carried out by the Italian school demonstrate a concept of urban to territorial type in which the scale is extended and thus considered unfinished. This incompleteness, as result of

his death, refers to the scale of the territorial type proclaimed by Muratori – a point also noted by the specialists of the Italian school (Cataldi, 2002).

In the book, *Architectural composition and building typology: Interpreting Basic Building*, Caniggia and Maffei (2001) explain the basic territorial type considering it to be a portion of territory occupied and used for some kind of activity. It therefore represents the conquest of the settlement and the establishment of productive activity such as a farm or pasture. According to these authors, the basic territorial type is not, however, confined to its mere productive area, but is related to the total structure, equipped with access roads and related dwellings, both physically associated with the principal farm buildings.

The glossary defines the territorial type as a hypothetical, territorial and cultural project shared by its inhabitants, manifesting clearly established definitions of space and time. It encompasses a specific way of traversing, harvesting, cultivating, as well as organizing it into a hierarchical system of poles located around the markets in which the products are sold.

As may be observed, these are incipient concepts that can generate differentiated interpretations, due to the restricted development of the theme. For Gauthier (2005) this is a consequence of the typological paradigm, which in itself leads to ambiguities. He cites, in particular, the broad definition proposed by the Italian school: the type. For this author the concept represents the cognitive instance that makes the relational interpretation between the subject and the object in the formation of the built environment. He believes that, although the type may be viewed as an object that condenses the rules that established it, it also manifests the culture and social group that maintains and transforms it. Significantly, this characteristic factor can explain the various ambiguous interpretations that have subsequently followed Gauthier's analysis.

This discussion on types is of particular importance for their use in ongoing research, which discusses basic types located in a sub-district destroyed after the burst of a tailings dam in the state of Minas Gerais, Brazil. These studies are intended to contribute to the Public Ministry of the Environment's recommendation's that models for a new sub-district, should be as similar as possible to the one decimated. The recommendation included the choice of a new location to be discussed and agreed with the former residents. Other important factors to be considered were that the newly-constructed neighbouring houses should replicate the previous arrangements and socio-cultural relations. (Teixeira *et al.*, 2018).

In fact, during the development of this research project it became apparent that a single house would not represent the social and territorial needs of the former residents as the type could not be contained within four limited walls, being that, the plot should include areas to raise animals and cultivate crops. The hypothesis was made that the axis chosen by the residents to go fishing could also be viewed as constituent of a basic housing type. As such, it was impossible to propose a new environment when traditional features were not taken into consideration and alien semi-detached houses were bizarrely included in the first proposal.

In relation to anthropic action, the territorial type encompasses the place in which human beings spontaneously recognize themselves, in terms of living, circulating, inhabiting, producing, socializing and conducting business. The hypothetical design of a territory conventionally shared by its inhabitants, has definitions of space and time clearly established. This project integrates a specific way of traversing, occupying and cultivating the territory and finally of organizing it as a hierarchical system of poles around the markets in which the products are marketed (Pereira Costa *et al.*, 2017).

From the environmental point of view, the geographic position defines the territory on a global scale, by its climatic zones and characteristics of geological formation. However, it is on a local scale that one can observe the specificities of the territories. In this sense, geomorpholo-

gy assumes a fundamental role, since it focuses on the forms resulting from the relief, that is, on the spatial expression of the surface and its visible appearance. The geomorphological aspects define the topography, the drainage systems, water basins, the location of the watercourses and types of soils that characterize a certain landscape (Pereira Costa *et al.*, 2017).

In addition, human beings using their spontaneous consciousness are able to recognize the favourable dimensions that allow them to define an ideal unit for the establishment of their activities. This unit is structured by adaptations that, over time, allow inhabitants to experience and recognize themselves as part of this territory (Pereira Costa *et al.*, 2017).

5. A discussion of the unfinished concepts of the English School of Urban Morphology

Reading the work carried out by Conzen on the three towns, what is striking are the meticulous descriptions and analyses of a mosaic revealing a landscape made up of numerous streets and buildings settled around a ground floor arranged to perform a certain function according to a previous plan. His identification and analyses are rich in details and, although the author does not exactly explain how to select and classify into planning units and geographic orders, he presents examples and by following and examining those selected it is possible to interpret and use these as concepts.

However, regarding morphogenetic regions, planned units and geographical order, the author uses examples rather than offering explanations. It is very different to the presentation of the tripartite concepts, the burgrave plots or fringe belts that allow for a common concept. In this case, it raises the possibility of individual interpretation which may induce incorrect statements and conclusions.

Whitehand, Slater and Gu all refer to this situation, in which, a series of terms can demonstrate the weakness of the concepts (in the case of the English school) or the difficulty in understanding approaches (in the Italian school's case)

One of the weaknesses is related to the fact that the concepts, until relatively recently, have not yet been condensed into one single term. As Gu (2019) observes, these concepts are complex and clarification has not been helped due to the variety of morphological terminology. He identifies the mixed use of several terms such as urban morphological regions which can be also referred to as 'townscape regions', 'urban landscape regions', 'urban landscape units', 'townscape units', 'morphological units' and 'character areas', concluding that the problem deserves more systematic attention.

Whitehand also recognised the lack of coordination between disciplines and reports that both research and practice have tended to be slow in benefiting from the integration of the different disciplinary strands from analysis of urban morphological ideas of plan units and regions, to the architectural typological concept of fabric. He considered that plan units and morphological regions are primarily explanatory, and only secondarily a planning tool. A tissue has a notion to be applicable in architectural practice, involving an evolutionary process of the building types.

For Baker and Slater (1992) the term morphogenetic regions have their origin in Conzen's 1962 study of Newcastle upon Tyne. This work, cites the author, contains extremely detailed maps, but focuses on the morphological evolution of local urban plans taking into account the pre-modernist, industrial, and twentieth-century periods. He further comments that the maps do not present an explanation for identifying a morphogenetic region, nor do they contemplate

the medieval periods. This fact can still be observed in the technical glossary at the end of the book that does not mention the term, its principles and characteristics. However, as Slater notes, the term appears on a map of Newcastle, without further explanation.

6. Final considerations

The objective of these studies has been to enhance and improve knowledge regarding the unfinished concepts in Urban Morphology and to apply them to Brazilian contexts. A secondary intention has been to assist students in their theses and dissertations when identifying the most feasible notions to be utilised and developed in their studies. There was also a need to develop and supervise research, which enabled teachers to disseminate the results and to apply them in further studies. Members of the Landscape Laboratory have a belief that knowledge is better acquired when shared within the components. Strategy seminars and practices have thus been conducted to achieve these goals. At the beginning of these studies there was a general feeling that the group had not grasped an understanding of the unfinished concepts.

However, with time it became clearer that the authors and their disciples were also not so definitive or sure of these ideas being that they were themselves occupying an evolving environment. Moreover, to analyse transformations and facts one has to examine and use the contextual background, which inevitably incorporates interpretations and personal views. As such, the places that a researcher analyses in Brazil will manifest different characteristics to those in Italy or England, not only because of the environmental context but also because of the intervening cultural assumptions.

In relation to the study of territorial types, the place's occupation history should be established and the landscape constraints drawn and indicated on a map. Identification of geographical features, river basins, ridges, routes, built areas, poles and nodes further allow the understanding of the land occupation and its basic types. Another important realization is that to define planning units or geographical orders, it is imperative to develop a thorough morphological analysis of the surveyed towns. Without a solid knowledge of the evolution of such towns, it becomes an impossible task to delimit the morphological periods and consequently identify the planning units and their respective geographical orders. In conclusion, such considerations may ensure better project execution and may be of fruitful use when applied to the Brazilian context.

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