

The relation between urban morphology and municipal planning – The case of Oporto's Urban Development Plan

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The revision process of Oporto's Urban Development Plan (Plan) resulted in its approval in 2006, based on a critical assessment of the previous Plan published in 1993 and whose author is Duarte Castel-Branco.

According to the 1998 evaluation that led to the administrative approval of reviewing the Plan: "If nothing else, the time elapsed since its conception, invites to the assessment of urban planning concepts and development models that shore up the Castel-Branco Plan, as much as to the evaluation of the practical experience of its application.

Although some of the major options of the Plan, like accessibility (new bridges; conclusion of the VCI – internal ring road), the road hierarchy (motorway Oporto-Braga; ring system) and the green spaces (the City Park) are either accomplished or in the process of being accomplished, Oporto's Plan has been revealing major gaps and has completely failed in the following aspects: 1) insufficient regulatory distinction between consolidated and unconsolidated areas, 2) abandon of the morpho-typological criteria in the definition of the edificatory capacity within consolidated urban fabrics; 3) option for a single centrality model; 4) total inadequate urban management proposals for 'central facilities' areas (coefficient zero for edificatory capacity)." (in DMPE, 1998)

The need to update the main planning instrument for the city's territory occurred in the context of strong unsteadiness in the urban system. The growing real estate investments of the 1990's had its manifestation in a urban sprawl that occurred simultaneously throughout the metropolitan area, showing a fragmented pattern of occupation, also notorious in the transformation of Oporto municipality territory.

The city form showed deviations of the pre-existing urban prevailing types, permanently aggravated by the exclusive use of quantitative criteria, without reference to urban morphology. The perception of these deviations became particularly evident in consolidated urban areas.

Given the physical state of the city at that time, the revision of the Plan was based on the option of building up the urban model structure, based on the interpretation of the existing city forms.

In this process the morpho-typological units designated as Urban Fabrics formed the foundation for the following regulatory criteria of land use classification established in the Plan. On the other hand, this very same type of 'zoning' helped to define the geography of the city's main structural systems. The analysis was focused on the 'Layout' concept (as in Portas, 2005 and Solà-Morales, 1997) and started with the interpretation of the existing street network and its classification according to each street's relation with surrounding public space and buildings, making it possible to identify Oporto's main urban fabrics: the historical centers, the traditional city, neighbourhood housing, building complexes, urban voids, as well as industrial units and non-integrated units (large facilities areas and infrastructure).

We established links between each urban fabric historical genesis and their urban characterization, considering the parametric data obtained by measuring sample areas that allowed us to evaluate their capacity of resilience and transformation in a systematic way.

As described in Fernandes de Sá, Juncal, 2010, the Plan revision assumed that "the city is always a complex and heterogeneous system, in which transformation occurs in different ways and with very different rhythms. In Oporto, this diversity also presents various degrees of urban consolidation, which can be seen both in the street layout and in building forms. The different combinations lead to different degrees of predictability of the city evolution.

Considering that there is more than a single logic in city changes, as a result of multiple factors and different behaviours of the agents that transform the territory, the Plan aims to be a prospective model of a certain reality, reflecting its essential characteristics, and therefore represents the forms in which it tends to evolve, or how you intend it to evolve."

It is based on the so identified Urban Fabrics characterization that we aim to report the experience of the urban model conceptions that supported the Plan revision and allowed to consider the different urban realities of the municipal territory.

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