

## **Methodology for the analysis of urban squares of Oporto**

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The study of public open spaces has been a key role in the analysis of the city, and a central focus in some theories and approaches. This morphological element is fundamental not only to the comprehension of the history of the city but also to the perception of the evolution in nowadays.

This article proposes a methodology for the analysis of public spaces – in particularly the urban squares – according to typologies based on time, space and function. This methodology should be comprehensive, allowing an analysis of all the urban squares of a particular city, the classification of these urban squares according to different types, and the comparison of the results between different cities.

The core element of this methodology is an evaluation matrix that brings and synthesizes all the information and work of analysis. The application of the evaluation matrix to each square comprises the use of text, photos and drawings on cartographic material, and focuses two levels of analysis of the space: a) the relations between the city and the square, and b) the square. The first level of analysis is the characterization of the square focusing the relations between the square and the city- that means that is the relation between the square and the urban tissue in which is inserted. The second level, the most important, makes a brief historical review, the identification of the main uses- of the squares and of the surrounding buildings – and a detailed analysis of the form of the square (according with its form, geometry, orientation, dimension, relations with streets, existence of significant elements, urban facilities, vegetation and pavement materials).

This methodology was applied to the city of Oporto. This city is constituted by 140 urban squares, that was collected and integrated in a data base, and identify in a general map of the city. With this collection it was possible identify and raise all the public spaces, and have a subdivision of different types. The application of this methodology has enabled the identification of eight different types of urban squares, considering time, space and functions: i) the square as a key element in the urban history of the city; ii) the square as an element with a formal stability through time; iii) the square as an element that has suffered a functional change over time; iv) the representative square; v) the residential square; vi) the square with a key role in the street system; vii) the square-garden; and finally, viii) the square as part of the waterfront. Due to the nature of this classification – these types

are both related to time (types i, ii, iii, and iv) and to space and function (types iii, iv, v, vi, vii, and viii).

The first type includes squares resulting from, or promoting, key transformations in the city. These are the result of a planned vision, being an important part of the process of urban expansion and growth. These squares are normally located near the gates of the city wall, like, for example, the *Praça da Liberdade*.

The second type comprises a set of squares that has kept its formal characteristics through time despite the overall transformations of the surrounding urban tissues and of the city, like *Largo de Penaventosa*.

The third type corresponds to a set of squares that, despite keeping their form and shape, has suffered a number of severe changes in terms of use. As in the former case, these squares are usually located in the historical kernel. Most of these spaces were former markets (of fish, bread, vegetables) located in strategic places of the city such as the gates of the city wall, like, for example, the *Praça de Lisboa*, previously named by the *Anjo* market.

The fourth type includes squares conformed by key buildings with a significant representativeness in the city. This includes religious - *Terreiro da Sé*, militar - *Praça da República* or civic - *Praça Humberto Delgado*.

The fifth type includes squares which are mainly conformed by residential buildings (in the city centre, semi-detached houses and detached houses, and multifamily buildings in the peripheral parishes). The first sub-type corresponds, generally, to squares with an irregular shapes; the second sub-type corresponds to squares with regular shapes as part of planned neighborhoods and, finally, the last sub-type, corresponds to squares where the boundary between buildings and public space is less clear.

The sixth type includes squares which main function is the articulation between different streets. Some of these squares correspond to residual spaces and have emerged after the streets design and construction. Nevertheless, some of these spaces, due to their form and dimensions, are very important in the urban layout of Oporto - *Praça Mouzinho de Albuquerque*.

The seventh type corresponds to the square-gardens. These are carefully planned squares in terms of function, normally regular and well-defined shape. The largest public open spaces of the city correspond to some of the squares included in this type - *Praça Nove de Abril*.

The last one, the eighth type - the square as part of the waterfront - includes a number of squares located between *Ribeira* (in the historical kernel) and the city of *Matosinhos* - *Passeio Alegre*, *Esplanada do Molhe*.

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