

The urban morphology of cities of Portuguese origin: configurational aspects in Brazil and Portugal

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The presente paper contemplates the comparative configurational assesment of urban settlements around the worls, focusing on the performance of Portuguese (Braga, Coimbra, Évora, Faro, Fátima, Funchal, Lisboa, Óbidos, Ourém e Porto) and Brazilian cities (Alcântara, Anápolis, Antônio Prado, Aracaju, Aracati, Belém, Brasília, Cachoeira, Cuiabá, Diamantina, Florianópolis, Fortaleza, Goiânia, Goiás, Icó, João Pessoa, Lençóis, Maceió, Manaus, Mariana, Mucugê, Natal, Oeiras, Ouro Preto, Parati, Pelotas, Pelotas, Penedo, Petrópolis, Pirenópolis, Porto Alegre, Porto Seguro, Porto Velho, Recife/Olinda, Rio de Contas, Rio de Janeiro, Rio Grande, Salvador, São Luís, São Paulo, Teresina, Tiradentes, Uberlândia e Vitória), in regard to the exploration of topographical and geometrical variables of the urban morphology (cf. MEDEIROS, 2006).

The study is guided by the following research inquiry: to what extent do the Portuguese and Brazilian cities resemble each other from a configurational point of view, considering they have a shared urban matrix? The questioning arises from whether we are facing an specific configurational type or if the features identified for the two groups are common to other urban settlements around the world.

In order to shed light over this issue, the regional differentiation used by UNESCO is adopted by this research, for it contemplates simultaneously geographical and cultural criteria (Latin America and the Caribbean; North America; Europe; Asia and the Pacific; Arab States and Africa). However, for the purpose of this research, the Brazilian cities are separated from the Latin American group and the Portuguese urban settlements are also separated from Europe. The intention is to contrast the contemporary Portuguese urban artifacts with those of the Portuguese America, having in mind the shared matrix for the form-space configuration of these cities.

Through the configurational approach, the city is assessed in terms of its hierarchized structure, differentiated in terms of permeability, which is the degree of topological accessibility in the numerous open spaces composing an urban settlement, thus

revealing the emerging attributes of the relationship between the whole and its parts. The reading is conducted by the tools and the theoretical and methodological apparatus of the Space Syntax or The Theory of the Social Logic of Space (HILLIER e HANSON, 1984; HILLIER, 1996, HOLANDA, 2002; BARROS, 2006; MEDEIROS, 2006), with focus on the representation of the axial map. In order to create the urban configurational data base, geoprocessing resources were applied, using a System of Geographical Information (SIG).

A non-probabilistic sample of the non-intentional kind is used as statistical procedure. It means that the choice of the samples was based in the convenience and availability of cartographic basis. The data base of cities around the world, composed of 164 settlements was built considering: (1) 44 Brazilian cities, selected based on size (number of inhabitants superior to 300.000) and patrimonial heritage (colonial urban settlements); (2) 76 existing axial maps in the urban database from the Space Syntax Laboratory, in London; (3) 33 maps sent under solicitation by researches from several universities around the world, which are part of the research network in Space Syntax; and (4) 11 maps produced from the cartographic database obtained in the internet in raster format (specially for the Portuguese cities, except the map from Lisbon).

From the results obtained, the following can be highlighted: (1) the Asian and European cities, and to some extent the Brazilian ones, present predominantly lower values both for the topological and geometrical variables, which implicate in an considerable size of the settlements and a fragmentation of their respective street layout; it is thus observed a similarity of characteristics in the group, but there is still a difference: the Asian cities are more accessible, the European ones are in an intermediate level, and the Brazilian ones are the least accessible; (2) the Portuguese cities, although they present lower values for the geometrical variables (once they are the smallest systems investigated in the sample), contain several topological variables of high or intermediate values, which reveal positive aspects in terms of configuration, especially in regard to synergy and intelligibility; (3) the Brazilian cities, undoubtedly, concentrate the highest number of reduced values, mainly in the topological sense: from the 17 situations established, 9 are in Brazil.

When we assess the measurements just for the old centers of the Brazilian cities, the topological values obtained grow substantially, bringing them closer to those of the Portuguese cities. The reading of the maps, however, reveal that the remarkable process of urban sprawl in Brazil was characterized by an unprecedented spatial fragmentation, resulting in a “quilt” pattern. The findings indicate that, currently, only the old centers keep the adequate configurational features, which legitimizes the allegory that such areas are some kind of “oasis in the labyrinth”. The scale and articulation of the street layout seem to be the predominant aspects in the configurational distinction between Brazilian and Portuguese settlements.