

Editorial

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The multiplicity and complexity of the design and planning issues found in Latin American cities have stimulated us to organise this themed issue. More than a simple motivation, however, we knew it would be a challenge. In the last century, the region has undergone many changes in urban planning as a consequence of an intense population growth, several internal and external migration waves, and modifications in urban transportation systems. The planning profession has had to deal with different challenges at different periods (e.g. a very high demand for housing and other urban infrastructures). Energy, environmental and social issues are also a crucial part of the current planning agenda. The distinct nature of the problems was evident in the list of more than 60 potential contributions initially submitted as abstracts, six of which were selected, after a thorough evaluation process, as full papers for this edition.

The first two contributions regard the assessment and planning of the urban environment. The focus of the first paper, written by Pessoa *et al.* (2016), is essentially on social aspects of the city. The authors try to highlight the potential social consequences, in addition to the inherent spatial aspects, of what is defined as ‘urban porosity’. Porosity is used as a metaphor for the description of the spatial discontinuities particularly common in Latin American cities. The authors use a ‘porosity index’ created from statistical data from 12 Brazilian metropolitan areas to demonstrate that porosity may exert both positive and negative influences on the resilience of urban systems. In the end, porosity was seen as an opportunity for improving resilience in the built environment. Barros *et al.* (2016) addressed another form of assessment of the urban environment through the analysis of high spatial resolution images. The authors aimed to identify residential patterns of three urban land use classes through the analysis of the parameters, graphics and results of variograms. In that case, the variograms are based on the grey level of pixels of orbital images of the Cabuçu de Baixo river basin, which is located in the northern part of São Paulo city. The authors concluded that the methodology can be useful for urban planning, as, for example, a fast and low-cost tool for the characterisation of the morphology of the city.

The second pair of papers is more closely related to aspects of the urban quality of life. Masiero and de Souza (2016)

investigated the potential for high humidity to control the air temperature. The effects of the impounding of water bodies and trees were monitored in different points of the Brazilian city São José do Rio Preto. Three of such points are of particular interest for the conclusions. The first was located at the margin of a dam, the second was located 200 m from the margin in an impervious soil and low built density area, and the third was located 400 m away from the first point under a tree. Data on air temperatures, humidity, wind speeds and wind directions were also registered at a rural station, to be used as reference values. The results of the study suggest certain levels of moisture could be applied as a thermal comfort strategy for the city. Baptista Neto and Barbosa (2016) investigated the concept of urban vitality through an analysis of a set of streets in the city of Belo Horizonte, Brazil. As the analysis avoided usual traffic engineering indicators (speed, volume and safety), the concepts of urban vitality were represented by the conditions that make streets and squares more lively and attractive to people. The results indicate that the best conditions for pedestrians were achieved when good-quality pedestrian environments were combined with more restrictive levels of traffic calming.

The two papers at the end of the volume deal with strategies for improvements in urban accessibility and mobility. Rodrigues *et al.* (2016) introduced an accessibility evaluation model through an application in the city of Santarém, Brazil. The model implemented within a geographic information system integrated the users’ perspectives through weights that reflect the importance of key destinations for daily activities. The outcomes can support decision-making for new investments to improve accessibility. Warren and Ortegón-Sánchez (2016) showed the possibilities of a modernised bus rapid transit (BRT) corridor in the city of Havana, Cuba. The current situation and a BRT scenario were modelled through a single bus route, which demonstrates that a BRT system can potentially provide a sustainable transport vision for Havana in a cost-efficient manner.

Although such papers are far from covering all points of interest regarding urban design and planning in Latin America, they certainly give us a clear view of the numerous issues that require investigation in the continent, and show the capacity of local researchers to deal with complicated urban problems.

The combination of such factors can be seen as an indication that researchers from other parts of the world are more than welcome to cooperate with us in the search for solutions to our problems.

REFERENCES

- Baptista Neto O and Barbosa HM (2016) Impacts of traffic calming interventions on urban vitality. *Proceedings of the Institution of Civil Engineers – Urban Design and Planning* **169(2)**: 78–90, <http://dx.doi.org/10.1680/jurdp.15.00007>.
- Barros DL, Giannotti MA, Larocca APC and Quintanilha JA (2016) Urban land use pattern identification using variogram on image. *Proceedings of the Institution of Civil Engineers – Urban Design and Planning* **169(2)**: 56–65, <http://dx.doi.org/10.1680/jurdp.15.00006>.
- Masiero É and de Souza LCL (2016) Improving urban thermal profile with trees and water features. *Proceedings of the Institution of Civil Engineers – Urban Design and Planning* **169(2)**: 66–77, <http://dx.doi.org/10.1680/jurdp.14.00063>.
- Pessoa IM, Tasan-Kok T and Altes WK (2016) Brazilian urban porosity: treat or threat? *Proceedings of the Institution of Civil Engineers – Urban Design and Planning* **169(2)**: 47–55, <http://dx.doi.org/10.1680/udap.15.00009>.
- Rodrigues DS, Ramos RAR and Tobias MGS (2016) A spatial multicriteria model for urban accessibility mapping. *Proceedings of the Institution of Civil Engineers – Urban Design and Planning* **169(2)**: 91–103, <http://dx.doi.org/10.1680/udap.15.00014>.
- Warren JP and Ortegón-Sánchez A (2016) Designing and modelling Havana's future bus rapid transit. *Proceedings of the Institution of Civil Engineers – Urban Design and Planning* **169(2)**: 104–119, <http://dx.doi.org/10.1680/jurdp.15.00015>.