

Urban morphological practice: an example from Brazil

Staël de Alvarenga Pereira Costa and Marieta Cardoso Maciel, Escola de Arquitetura/UFGM – Departamento de Urbanismo, Rua Paraíba 697 Sala 400, Bairro dos Funcionários, 30 130 140 Belo Horizonte/MG, Brazil. E-mail: spcosta@arq.ufmg.br

Several years ago, McGlynn and Samuels (2000, p. 79) commented that 'ISUF has to make a great effort to engage with the operational problems that are posed by the production of urban form today'. More recently Whitehand (2007) and others have drawn attention in this journal to the more general problem of bridging the gap between research and practice in urban morphology. We present here a Brazilian example of the current application of urban morphology in practice (see also Pereira Costa, 2006).

The School of Architecture in the Federal University of Minas Gerais, Brazil has a programme in 'public architecture' that provides students with an opportunity to take part in projects in the poorest communities. The purpose is to improve the built environments of the poorest families while simultaneously providing an integral part of the students' training (Alonso, 2006). One such project is in the squatter settlement of Bairro 9 de Março on the outskirts of the city of Barbacena, about 200 km from Belo Horizonte: here a range of approaches to urban form were put to practical use (Campos *et al.*, 2007; Pereira Costa *et al.*, 2007).

The basis of the project was urban design methods concerning the meaning of place (Bentley *et al.*, 1999, p. 76), based on the views of the local population and community leaders (Rappoport, 1979, p. 25). Surveys revealed the need for improved design and construction of streets and pavements, and the provision of a health centre, a community centre, a church and places for children to play. Appraisals were also made of the image of the place (Lynch, 1977, p. 46), and infrastructure and transport (Alexander *et al.*, 1977, p. 270). Both land-use regulations and federal law (República do Brasil, 1979, p. 3) needed to be considered, the latter particularly in relation to the prohibition of buildings on steep slopes: houses and roads that could remain had to be distinguished from those, some already in bad condition, that had to be demolished. Urban morphological methods developed by Conzen (1981, p. 60) and analyses of open and built spaces were instrumental in preparing topographical maps showing building block plans and street layouts.

Based on the analyses, for reasons of safety 10

per cent of the houses needed to be relocated to vacant sites. House typologies (Caniggia and Maffei, 2001, p. 108) were researched to provide tenants with models that could form the basis for the rebuilding of their houses on vacant plots. Because of the risk that unstable vacant sites would be illegally occupied, geological investigations were necessary (Teixeira, 1999, p. 106).

The proposals for urban renewal and associated landscaping were accepted by the local government, and federal government agencies are providing funding (Fundação de Desenvolvimento da Pesquisa, 2007). Another outcome is the provision of funds for research to evaluate the project as a basis for planning interventions on similar sites. The quality of the project has been achieved by an integrated approach in which academics, students, the local population, local planners and other professionals have all been involved. However, sound methods, especially in providing a thorough understanding of place and context, were fundamental.

Acknowledgements

The authors are indebted to their students, Luis Octávio Campos, Gustavo Kamino, Helena Baeta and Renata Cândido for their assistance.

References

- Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I. and Angel, S. (1977) *A pattern language* (Oxford University Press, New York).
- Alonso, P. H. (2006) 'Arquitetura pública de Cataguases', unpublished keynote presentation to the Ministério das Cidades and the Federação Nacional dos Arquitetos, October.
- Bentley, I., Alcock, A., McGlynn, S., Murrain, P. and Smith, G. (1999) *Entornos vitales* (Gustavo Gili, Barcelona).
- Campos, L. O., Kamino, G., Paiva, J. E. M. and Pereira Costa, S. A. (2007) 'Historical studies and urban morphology of Barbacena, Minas Gerais', unpublished paper presented to the Fourteenth International Seminar on Urban Form, Ouro Preto, August.

- Caniggia, G. and Maffei, G. L. (2001) *Interpreting basic building: architectural composition and building typology* (Alinea, Firenze).
- Conzen, M. R. G. (1981) 'Historical townscapes in Britain: a problem in applied geography', in Whitehand, J. W. R. (ed.) *The urban landscape: historical development and management* (Academic Press, London) 55-74.
- Fundação de Desenvolvimento da Pesquisa (2007) *Edital de apoio a projetos de extensão em interface com a pesquisa* (FAPEMIG, Belo Horizonte).
- Lynch, K. (1977) *The image of the city* (MIT Press, Cambridge, MA).
- McGlynn, S. and Samuels, I. (2000) 'The funnel, the sieve and the template: towards an operational urban morphology', *Urban Morphology* 4, 79-89.
- Pereira Costa, S. A. (2006) 'Experiencias academicas en regeneracion urbana', unpublished keynote presentation to the conference on Diseño Urbano en Contexto, Universidad Nacional de Colombia, Bogotá, September.
- Pereira Costa, S. A., Maciel, M. C., Campos, L. O., Baeta, H., Kamino, G. and Cândido, R. (2007) 'Urban renewal in Bairro 9 de Marco, Barbacena, Minas Gerais', unpublished paper presented to the Fourteenth International Seminar on Urban Form, Ouro Preto, August.
- Rappoport, A. (1979) 'An approach to designing third world environments', *Third World Planning Review* 1(2), 23-40.
- República do Brasil (1979) 'Lei Federal no. 6667/1979: dispõe sobre o parcelamento do solo urbano e dá outras providências', *Diário Oficial de União*, 19 December.
- Teixeira, E. C. (1999) *Geologia urbana paratodos: uma visão de Belo Horizonte* (Edição do autor, Belo Horizonte).
- Whitehand, J. W. R. (2007) 'Urban morphology and policy: bridging the gap', *Urban Morphology* 11, 79-80.

Urban morphology and urban design

Brenda Case Scheer, College of Architecture and Planning, University of Utah, Salt Lake City, UT 84112-0370, USA. E-mail: scheer@arch.utah.edu

There has recently been a flurry of discussion in this journal about the relationship between urban morphological research and practice (Hall, 2008; Samuels, 2008; Whitehand, 2007). As a practising architect and planner, I have frequently applied the concepts of typology and morphology in my design work. I have used neighbourhood morphology to develop a successful architectural *parti* that married a new type to an older pattern: I have used the morphological narrative of a dying small downtown to develop its urban plans and guidelines for its recovery (Scheer and Scheer, 1998). I have re-scaled old patterns for new uses, to draw a cultural line from the past into a new, progressive future. I have identified critical urban design issues, and thus solutions, that could only be revealed through a close reading of a region's morphology. So why does the translation of morphological ideas to practice seem so treacherous?

Until the whole movement degenerated into a thematic cut and paste routine, many architectural theorists explored notions of typology and urban form as a pointed response to the universality of modernism (Krier, 1982; Moneo, 1978). Anthony

Vidler (1977) went so far as to propose that the city (its building types, its customary form and meaning) is the *third typology*, by which he meant that designers could use the city as an autonomous reference (instead of *nature* or *machine*, which were Vidler's first two references). Ultimately discredited by association with post modernism's historical pastiche, remnants of these ideas surface everywhere in architecture, frequently as a rich form of contextualism that is more whispered than proclaimed (Goode, 1992).

Urban morphology, as a source for urban design, suffers from the same unpopularity and misreading among architectural critics. Its association with small-scale, traditional urban environments (townscape and New Urbanism) has made it suspect for applications in respected, high image architecture. World architecture glorifies large, multi-user, complex urban projects: it is an urbanism of slickness, sculptural shape and show-off design, symbolic of large corporations and overriding control, totally conflicting with the old-fashioned regulating plans, lots, blocks, and small typologies now associated with morphology. As Ivor Samuels