

Landscape Architecture in the Developing World: The Growth of Informal Settlements

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Our societies are facing many issues that should be addressed by the landscape architecture profession. If we assume that challenges such as global warming, decaying infrastructure, depleting water resources, deforestation, ageing populations and human obesity are already on our radar screens, are there other issues yet to come to light that we should be considering in our education, research and practice?

There are now 7 billion people on the planet, and global agencies are projecting continued population growth. Most of this growth, however, will not be in the developed world.¹ By 2030, there will be 7 billion people in the developing world alone and only 1 billion in the developed world (UNFPA, 2011). At present, over half of the world's citizens live in cities and urban migration will continue. By 2050, a large part of the new settlements in urban areas will be of an informal nature. Already, over 30 percent of the world's population live in informal housing settlements otherwise known as slums, barrios or favelas. Many cities in the northern hemisphere, such as Caracas, Mexico City, Mumbai and Lagos, have high proportions of barrios or favelas. For most of these cities, as many as half of their settlement areas are informal in nature. Caracas is closer to 80 percent (Davis, 2006). The southern hemisphere is experiencing similar phenomena. Figure 1 shows the main centres of informal settlements, with examples of major cities that are experiencing invasive informal settlement including Rio de Janeiro, Sao Paulo, Jakarta, Nairobi and Johannesburg.

Christian Werthmann (2009) concludes that the number of slum dwellers will double by 2030 to reach over 2 billion. If landscape architects are looking for where the potential 'market' (and the need) is, it will not be in places like the United States of America or parts of Europe where there is an oversupply of housing and some cities are actually experiencing depopulation. This is also true in parts of Japan and Russia.

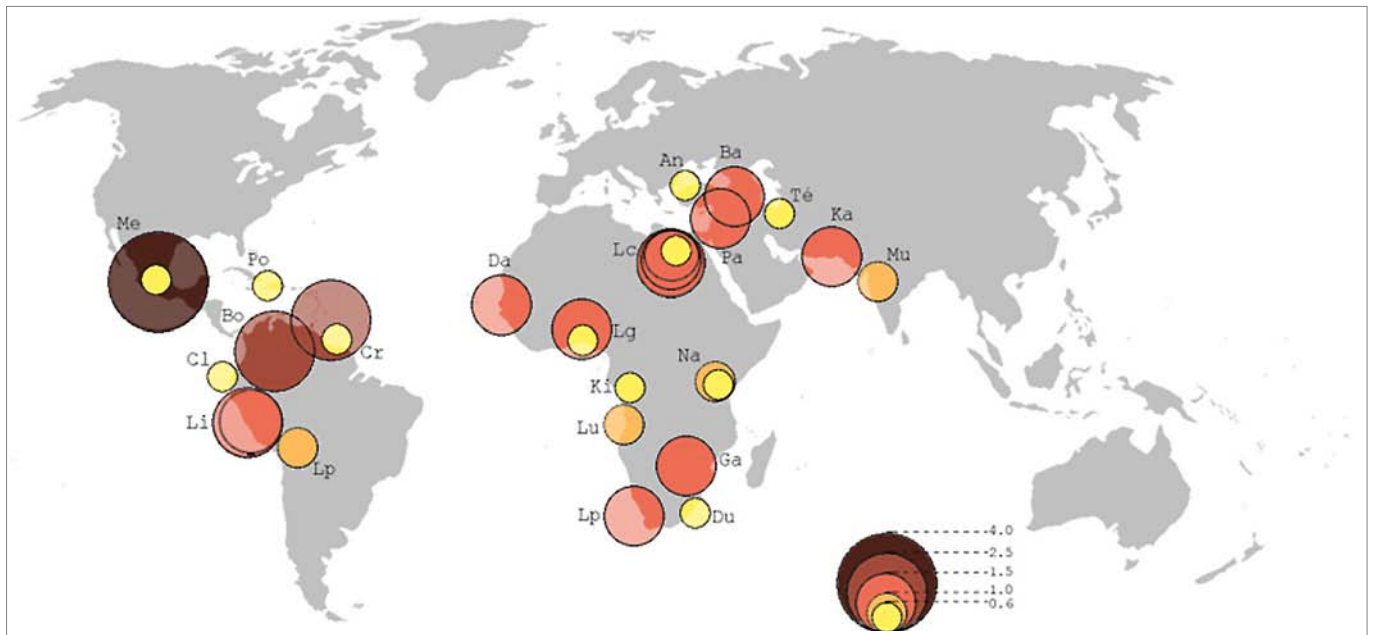
Werthmann suggests that city governments have gone through several stages related to informal urbanisation within their borders. The first stage was denial, where these people 'did not exist' and therefore received limited or no city services. The second stage was removal, where occupants of these settlements were evicted and driven off the land, often with no alternative accommodation to go to. Werthmann feels that in the current stage, acceptance, efforts are being made to integrate this form of settlement into the urban fabric. Given this relatively recent trend, the question is will built-environment design professionals have a role in this process? Further, will landscape architects have a significant role in the developing world in addressing big issues such as the form of urban growth?

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REFLECTION



The profession of landscape architecture is growing rapidly in the developing world as evidenced by the doubling of professional educational programmes over the past decade and as observed through my work with the International Federation of Landscape Architects Education Committee. This growth ranges from the dramatic rise in China² to more modest incremental increases in Africa and Latin America. Do we have the numbers, knowledge and sensibility to engage in leading issues such as the improvement of informal housing? In China, which is experiencing great growth in the profession, landscape architects are involved in urban development. Their work, however, is in the context of traditional 'formal' settlements. In other developing countries, such as India, Venezuela and most of those in Africa, landscape architecture barely exists as a profession and is generally unprepared to meet pressing challenges of rapid urbanisation. Can landscape infrastructure and the profession be part of the solution?

On further examination, it is important to note several initiatives in recent years that demonstrate relevance. For example, in 2004, a team of landscape architecture students from a Swedish university helped conduct a situational analysis of the informal settlement of Kisumu, Kenya. The students mapped conditions and made observations for improving landscape, drainage and other settlement infrastructure, which served as the basis for further work on the UN-Habitat Cities without Slums programme (UNHSP, 2005). In Sao Paulo, Brazil, Paulo Pellegrino, professor of landscape architecture at the Federal University of Sao Paulo, serves on a multidisciplinary working group to protect and enhance water sources for the city. He has undertaken studies and design studios to restore green infrastructure in response to the impact of informal settlements on the watershed.

Christian Werthmann and John Beardsley of the Harvard Graduate School of Design in Cambridge, Massachusetts, led the Dirty Work initiative, which was concerned with the question of how life in informal cities can be improved through design (Werthmann, 2009). Their studio, in cooperation with authorities

Figure 1: Major centres of informal settlement (en.wikipedia.org/wiki/Slum, 15 November 2011).

Note: The data (Davis, 2006) for Figure 1 illustrates the relative size of major slums of the world. The cities are abbreviated (eg, 'Me' is Mexico City), and the numbers represent millions of people (eg, for Mexico City the number 4 represents 4 million people).

and experts in Sao Paulo, examined and developed strategies for infrastructure development for an informal settlement adjacent to a major reservoir that represented an important source of water for the city. Thirteen tactics were developed to demonstrate designs for improving greening and drainage functions within the favela environment. This project was the winner of an American Society of Landscape Architects award in 2010.

Professor Lucia Costa, from the newly formed master's programme in landscape architecture at the Federal University of Rio de Janeiro, Brazil, is engaged in work on the improvement of favela communities in that city. She concentrates on improving people's awareness of natural water courses and restoring their function.

In 2007, as a recent graduate from the University of Guelph, Ontario, Canada, Sarah McCans became an international intern and was based with the Urban Poverty and Environment Programme Initiative in Africa (McCans, 2008). Her fieldwork was done in Kampala, Uganda, and was directed toward children and youth. She worked with children through drawing as a medium to identify environmental issues. This information supported participatory planning directed toward improving the children's communities.

Kibera is the largest informal settlement in Sub-Saharan Africa. I had the opportunity to tour one of the 13 villages that are home to nearly 1 million residents just 2 kilometres from downtown Nairobi (Figure 2). The Kounkuey Design Initiative is a non-governmental organisation working along with numerous others to effect improvements. Their Kibera Public Space Project 01 has made great progress in providing for open space, according to expressed community needs, that has been reclaimed from garbage dumps. Construction of playgrounds, football fields and public gardens and a reclaimed floodplain area have strengthened the sense of community and increased the level of social interaction (Figure 3).

In conclusion, the growth of educational capacity in the discipline, and the examples of the role of landscape architects described above, point to the future potential of the profession. The issue of informal urban growth, as well as global

Figure 2: (left) Informal settlement in Kenya (James Taylor).

Figure 3: (right) Playground in Kibera (James Taylor).



warming, decaying infrastructure, depleting water resources and deforestation all present opportunities for curriculum development, research and practice in the developing world.

NOTES

- 1 It is generally accepted that the developed world includes Australia, Japan and New Zealand as well as all countries in Europe and North America. The developing world includes all countries in Africa, Asia (except Japan), Latin America and the Caribbean, and Oceania (except Australia and New Zealand).
- 2 In a presentation by the Chinese delegation to the International Federation of Landscape Architects Asia Pacific Symposium on Education held in Putrajaya, Malaysia, in March 2011, it was reported that there are over 300 professional programmes in landscape architecture in China.

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