招待論文 ／ Invited Paper

WHAT SORT OF URBAN DESIGN FOR WHAT SORTS OF URBAN PLACES?

Edward RELPH[1]

[1]Professor, Department of Social Sciences, University of Toronto Scarborough
(1265 Military Trail, Toronto, Ontario, CANADA M1C 1A4)
E-mail: relph@utsc.utoronto.ca

　　Urban design is sometimes defined in terms of making better places. This seems to mean mostly pedestrian-oriented, human-scale places in the high-density parts of older cities. Neither low-density landscapes of distribution centers, expressways and suburbs, nor the megaslums of the megacities of the developing world, factor into this definition except perhaps as examples of what to avoid. This paper is a manifesto for a broader understanding of progressive urban design that addresses the range of urban challenges and places of the twenty-first century.

　　Key words: *urban design, urban landscapes, urban challenges, place, infrastructure.*

1. MISGIVINGS ABOUT URBAN DESIGN

　Cities and towns everywhere have undergone enormous transformations since the mid-twentieth century. The most obvious of these is growth – growth in population and even faster growth in spatial extent. There are now megacities and mega-urban regions on every continent, so vast and so diffuse that they defy most conventional ideas of urbanism. They are interconnected in a global economic system that operates through huge hub airports, intermodal facilities and distribution centers. They contribute disproportionately to greenhouse gas emissions and climate change. They are infused by electronic communication devices that simultaneously disconnect us from immediate surroundings yet link us all in a global village. Standards of living have been achieved that could scarcely be imagined a generation ago. But these achievements are balanced by persistent and growing urban poverty: more than a billion people live in squatter settlements and slums lacking a basic infrastructure of water supply and waste disposal.

　What does urban design have to say about these new conditions of the twenty-first century city? For the most part, very little. All too frequently its practitioners seem to be so caught up in local attempts to redress the aesthetic mistakes of modernism that the larger picture goes unnoticed. The result, demonstrated for example in new urbanism, is a sort of anachronistic detachment from the massive urban challenges of the present and the not too distant future.

　I am not alone in these misgivings. Tony Lloyd Jones has asked the questions: "Is urban design equipped to address the global issues in urban development today? Or is it too narrowly concerned with the cities of North America and Europe (and, more specifically, only with small parts of those)?"[1] He doesn't give a direct answer, but he does offer the opinion that "...60 to 80 per cent of the world's urban extent is inappropriate for the application of mainstream urban design." I don't know how he derived these percentages, but it is hard not to agree that urban design, as it is mostly practiced, demonstrates a strong tendency to dedicate itself to making isolated places look nice.

　Before I go any further with this argument I must stress that I think urban design is an important discipline that has enormous potential. It offers insights into urban environments and places that grasp the value of direct experience, and it recognizes that there is far more to urban life than making money and owning a large house. It combines an understanding of urban regions with

the design details of streets, and offers a powerful vision for what cities might become. In no way do I disparage the places from which many urban designers derive their vision, namely the old parts of cities that were made when walking was the primary means of transportation and hand-made craftsmanship was the norm, and which seem to promote civility, urbanity, slow-movement, and slow food.

Many old towns and cities have a fine grain architectural texture, and a strong public realm of actively used streets and squares. They were magnificent products of a pre-modern era that have often been adapted well to current needs. They are wonderful to be in, and may well be models for how cities should be made in the future. But the fact is that they are small islands in the vast and turbulent ocean of twenty-first century urbanization.

2. REACTIONARY ORIGINS OF URBAN DESIGN

Almost everyone who writes about urban design notes that it is a confusing term. In Jon Lang's words "it can mean almost anything one wants it to mean."[2] Analytically it refers to the forms and townscapes of cities, which can be studied as objects in their own right. Normatively it refers to the creative practice of trying to make "better urban environments". Some clarification of what is meant by this can be found in the fact that the idea of urban design originated in a conference of architects and planners, held at Harvard University in 1956, in order to develop an approach in urban planning that would address the physical form of the city. Its subsequent popularity, however, appears to have developed as a reaction to what seem to be three great urban failures of the mid-twentieth century – modernist architecture, the bureaucratization of town planning, and the impact of cars on urban landscapes.

Modernist architecture offered futuristic architectural solutions to the problems of industrial cities, but when it was applied on a large scale it turned out to be insensitive, drab, soul-destroying, and placeless. Town planning was conceived early in the twentieth century as a way of resolving serious social and physical problems of industriaization by using heroic measures such as reconstructing cities or building new towns. But when town planning was institutionalized into municipal departments and official plans in the 1950s it was rapidly reduced to a bureaucratic process of development control. At the same time motor vehicles, which so far had been accommodated within existing urban forms, began to dictate an entirely new landscape of expressways, shopping centers and low-density suburbs that lacked most of the texture and public spaces of older urban environments.

So while it may not be possible to define urban design in a formal way, it is certainly characterized by a resistance to modernism, a critique of automobile oriented suburbia and attempts to recover some of the grand aspirations of the first town planners. It is this reactionary character, I think, that leads so much practical urban design into a historicist orientation and away from attention to the current, large-scale processes that are directing urban change.

3. PROCESSES AFFECTING URBAN FORM

In the central, older part of my city of Toronto the street pattern and the buildings date from the nineteenth and early twentieth centuries, when people walked or traveled by streetcars. Everything is close together, many of the two and three story houses on the tree-shaded streets are semi-detached, and residential densities at about 6000 per square kilometer are high enough to support transit. Most people live within easy walking distance of vibrant main streets lined with shops and restaurants. The design of the older parts of the city is justly and widely celebrated. There's little in the way of formal urban design projects here, but this is exactly the sort of pedestrian street and transit-oriented urban environment that many urban designers admire and hope to maintain and emulate.

I share their enthusiasm, but with a qualification. These pleasant places to live have to be seen in context. The context is that these pleasant parts of Toronto were built before about 1940, have a population of about 650,000, and are the central part of a metropolitan region with a total population of about 5,500,000. In short, the vast majority of people in the Toronto region live in automobile-oriented suburbs, built since 1950, that have been described by Jane Jacobs as "baffling physically, socially incoherent and ecologically destructive."[3] Such suburbs have been almost universally condemned by urban designers and new urbanists. In the Toronto region about 85 per cent of the population apparently live, to repeat Tony Lloyd Jones' expression, in areas inappropriate for mainstream urban design because the roads are too wide, the densities too low and the land uses too desegregated.

My point is this. The powerful economic and social forces that drive the current production of urban landscapes do not lead to the creation of the pedestrian-oriented places that are so celebrated and promoted by urban designers. What they do create are sprawling urban mega-regions, great corridors of development surrounding old city cores, stretching down the east and west coasts of North America, across Western Europe, along the east coast of China, through central Japan. These vast, extensive urban landscapes are encountered by moving across them or over them at high speeds in trains or in cars on expressways. We see surfaces of concrete and asphalt, huge signs, other vehicles, and at a distance horizons of houses and apartments, transmission towers, construction cranes, international airports that take up more land than central business districts, and a fragmented, low-rise landscape of big-box stores, industrial buildings and distribution centers.

The conventional criteria of urban design, such as legibility, enclosure, quality of the public realm, diversity and so on, have little relevance for this urban landscape. Only when we stop and get out of the car or off the train might those criteria apply as we find ourselves in a pedestrian pocket, a residential area or a shopping mall. But in fact these are just disconnected spots of private pedestrian space in galactic urban regions.

The conventional models of urban design have even less relevance for megacities with populations of more than 10 million in the developing world. John Bosch writes of São Paulo: "Every notion we have about planning and architecture evaporates here...What do you do about cities that threaten to swell into metropolises of 25 million people? You cannot do them justice with 'normal' planning or 'normal' architecture."[4.] São Paulo has one of the highest rates of helicopter use in the world because wealthy executives concerned about their safety commute from helipads in their gated communities to their offices. How does urban design address this, and what does it have to say about burgeoning megaslums of squatter settlements and shantytowns built out of necessity, and lacking even a basic infrastructure for energy, water supply and waste disposal, that are found not only in São Paulo but in all the megacities of the poorer parts of the world? The new urbanist vision of the future is of pedestrian-friendly places filled with neo-traditional buildings, but Mike Davis suggests that so far "much of the twenty-first century urban world squats in squalor, surrounded by pollution, excrement and decay"[5].

Two issues I have with urban design are, first, that it seems inclined to turn away from such pressing urban realities, and secondly, that it tends to look for solutions to the symptoms of problems rather than addressing root causes. The formation of mega-urban regions and, megaslums is the consequence of deep social and economic processes, not bad design decisions.

4. PLACE AND PLACE-MAKING

Place and place-making are central concepts in much urban design, where they usually refer to distinctive parts of architecturally defined townscape that reflect local history and environment. The British Commission for Architecture and Built Environment (CABE) suggests that urban design is "the art of making places for people" and from its design manual we can gather that this means finding ways to make main streets, town squares and small urban spaces look attractive.[6.] However, the reflections of numerous geographers, psychologists and philosophers suggest that this is a simplistic notion of place. It is widely understood that place is a complex concept that applies at many scales. My computer has its place on my desk; the place where I live is Willowdale, a district in the larger place that is Toronto; the Canadian Province of British Columbia is, according to the slogan on its vehicle license plates, 'The Best Place on Earth'; and the Earth can be considered the place of humanity. What characterizes all of these different places is that they are foci of attention. Space and landscape are expansive, drawn out to horizons, but place at any scale constitutes a centre that gathers meaning. The philosopher Jeff Malpas has argued that a place is a complex unity, an unbounded region that can turn outwards to reveal other places or inward to reveal its own character.[7] Place, he claims, is the very foundation of being and human existence. We were born, live and will die in distinct places, usually having their own names, that connect us to the world and always open out to larger realms of meaning.

The connection of place and being has two implications. First, it reveals that places are not simply defined by boundaries or architectural forms, but are as nested and interconnected as our experiences of the world. Just as with human beings, each individual place is simultaneously unique and shares characteristics with other places.

Secondly, it means that sense of place, while it might be focused on a particular town or urban district, is necessarily comparative. This is partly a function of history. Two hundred years ago peoples' lives were mostly confined to one village

or town, so their sense of place was deep and narrow. In contrast, our lives are now continually extended through travel, television and the internet. Our sense of place may be shallower than that of our predecessors, but it is extended and includes a comparative knowledge of many differences.

Urban design based in an extended and comparative sense of places as centres of meaning, cannot approach place-making not as a strictly local activity to enhance distinctiveness. Instead, it will aim to make settings that can be turned into meaningful places by those who work and live there. And it will aim to do this at many different scales and by attending to the factors that might make places that equitable, inclusive, sustainable and capable of adapting to uncertain and unprecedented urban changes emerging in the early twenty-first century.

5. EMERGING URBAN CHALLENGES

The last century was one of unprecedented growth and acceleration in almost everything. Global population grew four times to six billion, but economic output grew much faster – about 15 times – with the consequence that standards of living and life expectancies improved dramatically. The number of people living in cities increased at about the same rate as the economy, and this year, 2007, is believed to be when, for the first time, more than half the world's population can be counted as living in cities and towns. The future of humanity will be primarily urban.

It is believed by a number of people, Jane Jacobs among them as the title of her book *Dark Age Ahead* indicates, that this unprecedented growth has come at considerable costs that the present century will have to pay.[8] Powerful evidence for this view lies in a number of rapidly emerging urban challenges. These include:

•**Climate change**. Some climatologists believe climate change is caused by poor urban design, specifically low-density areas that depend on the use of vehicles and their greenhouse gas emissions. The Stern Review on *The Economics of Climate Change* submitted to the British Government in 2006, and based on the work of the Intergovernmental Panel on Climate Change of the UN, argues that if effective and immediate action is not taken to reduce greenhouse gas emissions the global average temperature could rise 5ºC, equivalent to the change in average temperature since the last Ice Age. "Such a radical change in the physical geography of the world," it suggests, "must lead to major changes in the human geography – where people live and how they live their lives."[9] In other words, the cities we have now were not built for the weather of the future. To reduce carbon dioxide and other emissions, and to adapt to inevitable climate changes, it seems substantial changes will have to be made to urban forms and ways of living.

•**Peak oil and the end of cheap energy**. There is mounting evidence that the sources of cheap energy, especially oil and natural gas, which fueled economic growth in the twentieth century will soon begin to run out, their production will peak but demand will not drop, prices will rise, and the inexpensive energy on which modern cities and economies depend will come to an end. This will impact especially on recently built areas of cities, those most dependent on automobiles and trucks, and these will somehow have to be retrofitted to support transit. This will require major adjustments in the urban infrastructure of roads and other services.

•**Sustainability and waste disposal.** A set of looming resource scarcities in ocean fisheries, water supply and forest products, in addition to those of oil and natural gas, will have to be dealt with through a shift towards sustainability. This will require careful attention to local patterns of consumption and production, including the possibility of large-scale food production within cities. Water shortages and urban agriculture will need urban design approaches, as well as systems of water and waste management that differ substantially from the ones currently used.

Sewers and water supply systems were inventions of the nineteenth century that made possible tremendous improvements in health and living conditions. Tony McMichael, an epidemiologist and authority on public health issues, maintains that these old infrastructures are no longer suitable for contemporary cities.[10] Bringing water from remote sites, and moving sewage and solid waste away from its origins to equally remote processing plants, does not encourage responsibility for the use of scarce resources and generation of waste. These systems are not appropriate for sustainable cities.

These three challenges for cities are daunting enough, but there are others, including growing megaslums, emergent and resurgent diseases, chronic water scarcity, and an emerging epidemic of obesity and diabetes in the developed world. All have implications for urban design, because they either seem to be consequences of defective urban form that will have to be corrected, or they will require substantial changes to urban forms and infrastructure in the future.

6. A BRIEF MANIFESTO

Let me summarize my concern and my hope for urban design as succinctly as possible. From the perspective of the huge changes occurring in cities in both the developed and the developing world, urban design as it is now practiced seems like a marginal activity. To play a lead role rather than stand in the wings, it must, first of all, pay close attention to emerging urban challenges. Secondly, it must be attentive to the social and economic causes of these challenges, although it can do little to modify those causes. Thirdly, it has to develop an extended appreciation of places as settings for human existence that can be facilitated but not directly created through design.

From these foundations, urban design needs to develop critical and creative approaches that will engage the current and emerging challenges, and then provide direction on how city forms can be created or adapted to meet these challenges.

This task has to begin, I believe, with careful attention to urban infrastructure.

7. COMMENTS ON URBAN INFRASTRUCTURE

There is no more powerful factor affecting urban form than the infrastructure of roads, pipes, cables, bridges, rapid transit, and communication systems. While economic processes may determine the overall scale and rate of change, planning decisions may establish where particular land uses are located, and architectural fashions may influence the appearance of streetscapes, the fact is that businesses and buildings can only function where the appropriate infrastructure is in place. If emerging urban challenges make it necessary to redesign and retrofit existing forms of cities, then innovative infrastructures will have to be devised to make this possible.

There has often been tension between the engineering approaches to infrastructure, and the responsibility of architects and planners for urban design. This tension is unproductive because infrastructure and streetscapes are both essential aspects of cities. They have to be work together, and that will require broadening both the idea of infrastructure and the idea of urban design.

Kate Ascher has recently written a wonderful book on what might be called the 'functional' infrastructure of New York City, without which even the most mundane tasks would be impossible.[11] She writes about streets and traffic signals, manhole covers, signs, lights and parking meters; she describes the movement of freight, rail yards, container terminals, bridges, wholesale and retail markets; and she discusses how the subway works, and systems for communications, water supply, waste disposal and power distribution.

It is clear from her account that functional infrastructure directly affect the width and arrangement of many details of the appearance of city streets even if it is comprised mostly of pipes and cables hidden beneath the surface. In fact much infrastructure is not hidden, though it may go unnoticed; it creates its own extensive urban landscapes of such things as elevated expressways and water treatment plants. Only when they are not working well, when the power fails, or an expressway collapses, or water supply runs low, does functional infrastructure becomes obvious through its absence.

Functional infrastructure usually falls outside the purview of urban designers who are more concerned with what might be called the aesthetic infrastructure of the city. This consists chiefly of elements such as surface materials, street furniture and trees, built forms, edges, and connecting links that together contribute to attractively designed townscapes. They are attractive in the literal sense that they command peoples' attention. In this important sense aesthetic infrastructure is the opposite of functional infrastructure, because it is most visible and appreciated when it works well.

Andrew Cross suggests that unattractive landscapes, including those of functional infrastructure, seem to go largely unnoticed or ignored because there is little love for utilitarian places, such as expressways, airports and distribution centers, even though the services they provide are much appreciated.[12] He attributes this partly to a widespread and deepening lack of knowledge about where things come from and where they go to when we dispose of them.

This poses an urban design problem that is compounded because, as Kate Ascher writes of New York, there has been little coordination in the design of different functional infrastructure systems. They have been put together incrementally over many decades in response to different demands, and while they may work together they are often inefficient and poorly integrated. If urban design is to take a lead role in finding ways to deal with urban challenges, both this knowledge gap and the lack of coordination will have to be corrected. Urban design will, in other words, have to take full account of the unnoticed systems and places of the functional infrastructure of cities.

8. PRINCIPLES FOR PROGRESSIVE URBAN DESIGN

In order to engage effectively with challenges for cities in the present century, urban design has to move away from its reactionary origins and become progressive. It has to engage in finding urban forms that will alleviate what will be extremely difficult problems for cities in the near future. Principles for progressive urban design will have to emerge through practice, but I suggest that they should include the following:

•A precautionary principle: urban design cannot create meaningful places, but it can create conditions that will facilitate the making of places by those who use them. In doing this it should always aim not to exacerbate negative trends in the quality of urban life.

•Equity: urban design should promote equity and accessibility.

•Inclusion: in the cosmopolitan cities of the twenty-first century, urban design must be for all social groups, and all types of places no matter how functional.

•Sustainability: urban design should attend to the lifetime consequences of urban environments, and promote local production and zero-waste solutions.

•Global interconnectedness: urban design must attend to links between local actions and remote or global consequences, and vice versa.

•Temporality: the past should not be emphasized at the expense of the present and the future.

•Attractiveness: urban design should aim to enhance the visual qualities of the contexts of urban life (although places that are equitable, sustainable, and inclusive must surely be considered attractive).

9. CONCLUSION

Urban design can be a comfortable practice that deals primarily with design codes to improve the appearance of fragments of the central cities of the developed nations, or to reproduce aspects of old city forms in new developments. Alternatively, it can take a lead in trying to meet the emerging urban challenges of the present century, and so contribute directly to making sustainable and equitable urban places for the future. The latter path is a far more difficult one, but there are no easy paths to anywhere worth going to. I hope urban designers choose the progressive path, and so make all the difference.

REFERENCES

1) Tony Lloyd Jones, "Globalizing Urban Design", in Malcolm Moor and Jon Rowland (eds), *Urban Design Futures*, London: Routledge, pp. 29-37, 2006.

2) Jon Lang, *Urban Design: A Typology of Procedures and Products,* London: Architectural Press, 2005.

3) Jane Jacobs, "Preface" in John Sewell, *The Shape of the City: Toronto Struggles with Modern Planning,* Toronto: Oxford University Press, 1993. See also, Andres Duany, Elizabeth Plater-Zyberk, Jeff Speck, *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream*, New York: Farrar, Straus and Giroux, 2000.

4) Bosch, John. et al. *Eating Brazil*, Rotterdam: 010 Publishers, 1999.

5) Mike Davis, *Planet of Slums*, London: Verson, p.19, 2006.

6) *By Design: Urban Design in the Planning System – Toward Better Practice*, London: Centre for Architecture and the Built Environment, 2000.

7) Jeff Malpas, *Place and Experience: A Philosophical Topography*, Cambridge: Cambridge University Press, 1999.

8) Jane Jacobs, *Dark Age Ahead*, New York: Random House, 2003.

9) The Stern Review, *The Economics of Climate Change*, Summary of Conclusions, p. vi, London: Her Majesty's Treasury, 2006.

10) Tony McMichael, *Human Frontiers, Environments and Disease: Past Patterns, Uncertain Futures*, p.281, Cambridge: Cambridge University Press, 2001.

11) Kate Ascher, *The Works: Anatomy of a City*, New York: Penguin Press, 2005.

12) Andrew Cross, "Place, Experience, Movement", in Malcolm Moor and Jon Rowland (eds), *Urban Design Futures*, p. 150, London: Routledge, 2006.