

Professor Steffen Lehmann's views on 'Ecology and inner-City Urban Renaissance' (Indian Architect & Builder, May 2006, Volume 19(09)) was 'food for thought' for many readers. In this Q & A session, architect Preeti Goyal Sanghi (communication co-ordinator for Architecture & Development in India, an NGO that promotes sustainable habitats) seeks answer to her queries regarding issues related to urban renaissance which are mentioned in the article.

With reference to your article Ecology and inner-City Urban Renaissance...you say that compact urban design can result in reduction of Automobile dependency.... but I wish to bring to your notice that this claim has been, contested in research. In a careful and revealing review of empirical studies on the effect of urban form on transportation, Peter Hall found that "the research results are not consistent; indeed they are confusing".

[i]. He referred to widely cited studies whose findings, when compared to each other, are equivocal. Many of these studies have examined one parameter of travel (distance, time, frequency) instead of more complete assessments. Breheny, Gordon, and Archer found a weak link between densities and transportation energy use.

[ii]. Breheny suggests that energy savings from urban containment are likely to be disappointingly low. Indeed, even modest savings could only be achieved through draconian policies of containment. Given the implicit expectations of politicians about the benefits of containment, realistic savings from this approach are likely to be trivial. It has been suggested that the levels of energy savings likely to result from even quite tough compact-city proposals could be achieved in other, much simpler and relatively immediate ways. The promotion of improved vehicle technology and the raising of fuel costs have been suggested as two such ways.

[iii]. Travel is much more strongly linked to fuel prices and income than population density.

Also, the potential for urban renaissance based on a more compact city has so far been largely focused, on reduction of broad environmental impacts, and socio-economic gains. However, there seems to have been much less consideration of the compact city in terms of hazards and risks. A wide range of potential constraints and hazards can affect both existing and new urban compact development such as effects of storms and flooding, strong earthquakes, fires and explosions, whether accidentally, maliciously or naturally started. The compact city, by its very nature, potentially increases the level of risk from any such hazards that may exist

[iv]. Furthermore, discussions of compactness elude scale. Many of the features that compact city proponents find desirable, such as increased choice and opportunity, are more dependent on size and scale rather than on density or compactness.

I often wonder why then the compact city is promoted as a sustainable city? Is not the compact city a default model? Have not planners relied on the compact city, a model inspired mainly by old European and North American cities and towns, because there is no clear alternative? One reason why there is no alternative is that many do not know what to do to be sustainable. In this context I find some of your other ideas and suggestions besides compactness more appropriate.

Response by Professor Steffen Lehmann, PhD (Chair, School of Architecture and Built Environment, The University of Newcastle)

Sustainability is achieved by various criteria working together at the same time. I am fully aware of the confusion that currently exists around the notion of 'compactness and density'. Compactness and higher density delivers many advantages, and no doubt, it can increase the walkability of any city or quarter.

In this regard, a good ratio between façade surface to floor area (and volume) is important, which helps to avoid heat gain in summer and reduce heat loss in winter. Hereby it seems: the more compact, the better.

Highly regarded urban designer Sir Peter Hall has been one of the leading advocates for higher density and compactness. Only some months ago, in his keynote for the 'L'Enfant Lecture' in Washington*, he pointed out the benefits of compact cities and Transit-Oriented Development (TOD), by developing activity centres with higher densities around public transport nodes. In his speech, Hall went on to praise the compact, mixed-use cities of medieval times, which developed around the cathedral, as an example of sustainable city. I agree with Hall, higher density encourages travel on foot and bicycle, by maximising accessibility without using many resources (esp. if you bring the densities up to ensure that everyone has access to high-quality public transport, schools, social facilities and jobs). A good example of such development is the high-density we can find along express bus route corridors in the Latin-American cities; or inner-city clusters of high-density, such as Notting Hill in London, where densities of well over 100 dwellings to the hectare can be found. Density gives a sense of urbanity.

In the United States, we find most of the time an anti-urban, land hungry, low density model, typical for countries where the suburban condition has become the normal one. This condition also prevails - unfortunately - in many Australian cities, such as Perth and Brisbane. Those cities have low densities (and little compactness or mixed-use), and constantly require driving in the automobile to any place, as soon as you leave the suburban house. On the other hand, cities such as Paris, Berlin, Amsterdam and Vienna share the advantage of a reasonable urban density and a similar compact block model around well-planned urban public space. Everybody enjoys to live in those cities.

The typical Indian city is, of course - most of the time - a very compact one. Latest research shows that for large mega cities, such as Mumbai, the appropriate model is the one of a poly-centric mega city region, with multiple centers as self-contained clusters, linked by an efficient light railway system. ■

* Keynote by Sir Peter Hall for the 'L'Enfant Lecture on City Planning and Design' on the 15th of December, 2005 in Washington DC, organised by the American Planning Association and National Building Museum.