Redesigning our cities as ecosystems may see us move towards true sustainability

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***Urban Green** represents Neil Chambers' vision for bringing the power of the conservation and design movements together. Taking up the concept of 'ecomimicry', Chambers' priority is to see cities designed in ways that mimic the functions of ecosystems. **Karl Baker** would have liked to see more rigorous analysis, but feels it is a welcome addition to the on-going work of developing truly sustainable cities.*

Urban Green: Architecture for the Future. Neil B. Chambers. Palgrave Macmillan. July 2011. 256 pages.

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Edward Burtynsky's well-known photographs of mine tailings, quarries, and workers in Chinese manufacturing plants are a rare reminder of the vast territories, complex circuits, and messy business of material production that underpins today's global economy. This is the underbelly of our everyday consumption that remains conveniently distant in the wilds of Ontario or the Australian desert. Following Burtynsky's line of thought, Neil Chambers' new book *Urban Green: Architecture for the Future,* shows a concern for the wider ecological consequences of material production – specifically the mining, manufacturing and transporting of all that heavy 'stuff' that is a largely invisible prelude to the construction of our homes, offices and cities.

Chambers argues that "a huge chasm exists today between Green Building and ecological sustainability" with green building practices only scratching the surface of environmental responsibility and side-stepping the broader impacts of construction and urbanisation on eco-systems, waterways and wildlife habitats. We "can't just focus on individual buildings" but need to broaden the green building agenda to the "retro-fitting of larger systems"; infrastructure, entire cities and regional-scale ecosystems.

Wary of techno-fixes he argues: "if we continue to try to solve the problems created by using fossil fuels with technology-based sustainability, the only thing we will be making is a mess". If the ecological disaster of first-generation biofuels did not provide a clear enough caution on the problems of narrowly conceived 'clean energy', he suggests we will repeat the same mistakes with nuclear electricity, electric cars and large-scale wind farms. Drawn to decentralised and distributed energy generation systems, he goes on to place faith in new hydrogen fuel-cell energy technologies, although without the close life-cycle analysis that he demands of the various technologies he rejects.

While being 'green' today equates with energy savings and carbon reductions, for Chambers a bolder ambition is necessary, rightly pointing out that "energy-efficient light bulbs are great for saving energy and making your power bill less, but they do not grow back forests". Taking seriously the ecological
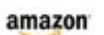
dimension of sustainability, he presents a much-needed correction to the narrow focus on energy efficiency and climate change that dominates today's green thinking.

His priority is not carbon emissions but the preservation and development of functioning eco-systems and water systems. Taking up the idea of 'ecomimicry' he asks "can we be as beneficial as a beaver?" – whose engineered dams and lakeside homes are obviously disruptive – but also establish vital habitats for other plants and animals while biodegrading over years rather than the too-permanent concrete and glass constructions of our cities. For Chambers "the goal of ecomimicry is to take entire cities … and redesign them in ways that 're-enact' the functions of ecosystems". This is bread and butter for ecologically-informed landscape architects, but is too often forgotten by architects, engineers and urban designers who have failed to take nature-inspired models seriously.

Nickel Tailings No. 34, Sudbury, Ontario 1996. Edward Burtynsky

Working with the idea that architecture is a client-based profession Chambers neatly suggests that city-makers should include eco-systems, wildlife habitats and watersheds as part of an expanded clientele. In achieving this ambition he muses that "maybe there will be no designer at all, and biologists will design the essential part of our future cities". While landscape ecologists probably should have more say in city design and would likely leave us with plenty of green space, ecological corridors and richer biodiversity, we cannot abandon decision-making on the city to a depoliticised science, whether ecologically informed or not. A question remains about how we 'speak for nature' and incorporate the demands of ecosystems with those of architects, developers and the multitude of human and non-human urban inhabitants.

There is a politics here, and although Chambers' is not explicit, it comes off as slightly libertarian, or at least firmly ensconced in North American suburban life with a car, backyard and stand-alone house. There is less focus on the benefits of cooperation that dense urban life might ideally facilitate and more on the possibilities of independence from inefficient centralised energy grids and backyard ecology. His brief outline of the political action needed to implement his ambitious vision counts too heavily on civil society and consumers 'speaking with their wallet'. For such a bold idea that requires extensive coordination there might be room for more traditional forms of government intervention.

Chambers is right in broadening what has become a narrow green agenda to assert that a serious environmentalism should put ecology at the heart of its mission. But, in common with the tech-based 'eco-modernisation' movement, he places tough social-economic and political challenges beyond his remit. Dealing with problems of income distribution, poverty, ill health and social relations might be a step too far for a book that is already wide-ranging in its scope. Nevertheless, to sidestep such issues and believe that the restoration of ecosystems will become a priority without being locked into a more comprehensive social and economic politics is to miss one of the key lessons of the sustainability movement.

This is an enjoyable read that takes us on intriguing tangents. As an architect and a blogger at treehugger.com, Chambers' book takes on some of the breezy style of web-based media. Readers familiar with the territory may be disappointed in a lack of new information based on rigorous analysis. Nevertheless, the reassertion of an ecologically-oriented vision is a welcome addition to the on-going work of developing truly sustainable cities.

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Karl Baker is a Researcher at LSE Cities, at the London School of Economics and Political Science. Karl recently graduated from the MSc City Design and Social Science programme at the LSE. He also holds a BA (Hons) in Political Science from Victoria University, Wellington. He has previously worked as a policy adviser for New Zealand's Ministry of Transport where he advised governments on priorities for transport infrastructure investment. He has worked on improving project evaluation methods to better understand the impact of transport infrastructure on the social, environmental and economic performance of cities. Read more reviews by Karl.

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