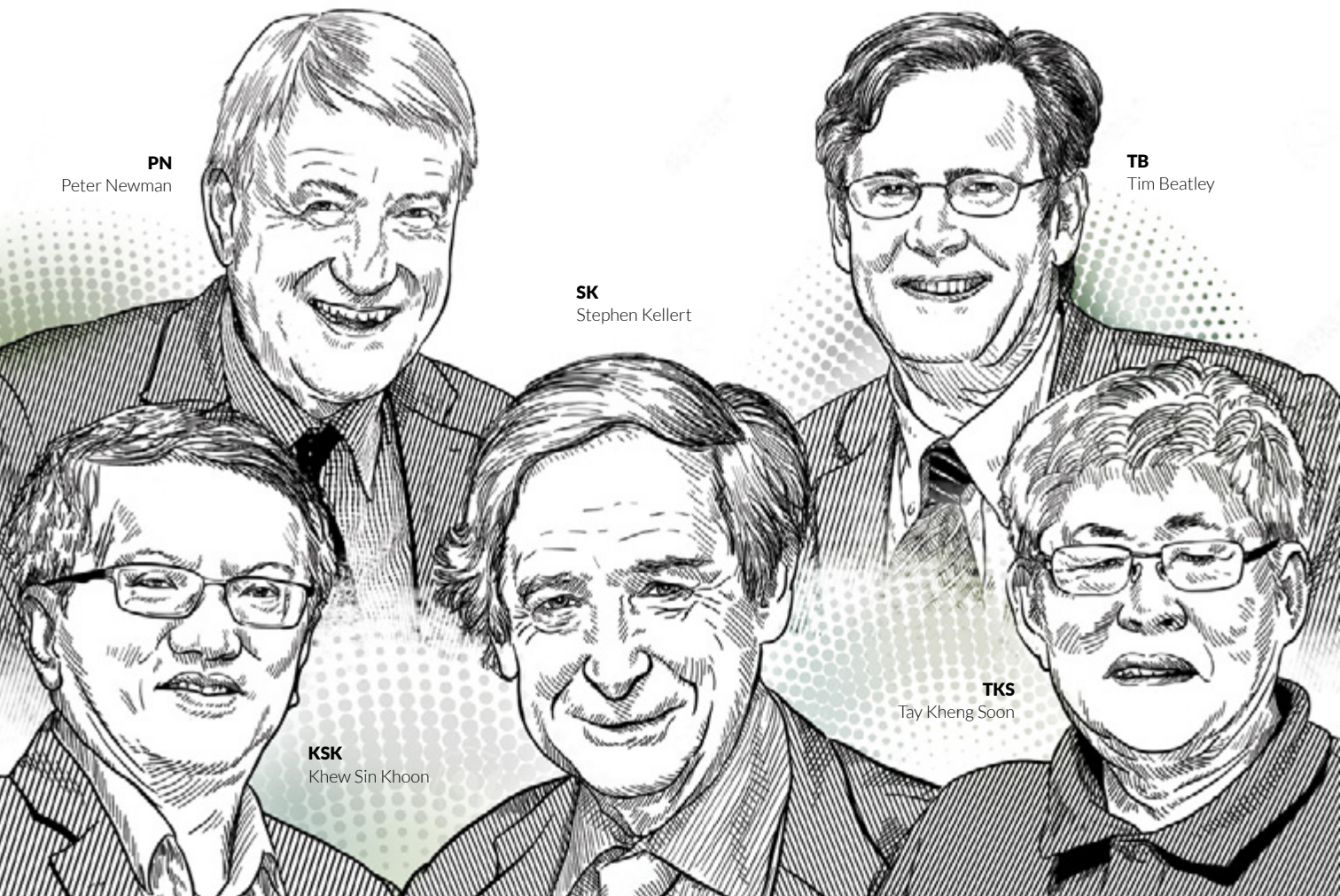




OPINION

Roundtable:
Stephen Kellert, Timothy Beatley,
Peter Newman, Tay Kheng Soon, Khew Sin Khoon

Biophilia: The Future of Sustainable Cities?



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Peter Newman

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Tim Beatley

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Stephen Kellert

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Tay Kheng Soon

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Khew Sin Khoon

Biophilia, the idea that humans have an affiliation to nature, is often advocated as a principle for designing more sustainable and liveable cities. Singapore's National Parks Board and Centre for Liveable Cities explored this in their biophilia symposium last October featuring three foreign experts—**Stephen Kellert** of Yale University; **Timothy Beatley** of the University of Virginia; and **Peter Newman** of Curtin University—alongside two local practitioners—architect and public intellectual **Tay Kheng Soon**, and **Khew Sin Khoon**, President of CPG Corporation and an avid butterfly enthusiast. The following is an edited transcript of their discussion.

Defining Biophilia

SK Is “biophilic design” just another fancy name for nature? If any expression of nature in the built environment is biophilic, then why are we using the term? Fundamentally, biophilic design is ecological. It's not simply putting a plant here or using some natural material there. If we are not creating a habitat or ecosystem—mutually complementary parts that together are greater than the sum of its individual inputs—then we haven't really done anything, in my estimation, that is biophilic. Another point is that our change needs to be experiential and emotional. In order to identify with and take responsibility for places, we need to be deeply connected to them. Biophilia is not simply loving nature—it is an affiliation with nature. The deeper the level of connection with nature, the deeper the respect we have for it and the moral responsibility that will emerge from this feeling of connection. All these are elements of what we mean by biophilia.

Embracing Nature, Warts and All

KSK One human expectation of nature is that we want it to be under our control. For many, the visual aspects of biophilia matter as long as we see greenery, but enjoying nature through a piece of glass is only a clinical interaction. We should get out and enjoy it in all its messiness and occasional danger. There is a wide variety of acceptance of “nature.” Biodiversity appreciation is not selective—if you enjoy the butterfly, you must accept the caterpillar. There is an innate fear of biodiversity in people, but you can't select what can or cannot be in natural areas.

Are there solutions? We have to educate ourselves that nature is sometimes messy and unpredictable. We should create in our designs a layered effect: start with a safe environment, layer it with a wilder area, and then an absolutely wild area. Temper that expectation and along the way, educate and engage both the young and the older generation who have lost touch with nature in the urban built environment.



“...if you enjoy the butterfly, you must accept the caterpillar.”

Khew Sin Khoon

SK The inherent problem with parks is that it reinforces a number of dichotomies. One is that humans are here and nature is out there; humans see nature as something to visit occasionally. We need to be able to integrate nature into our everyday lives and bring it into the spaces we inhabit. Another dichotomy is that we tend to think of nature as an aesthetic and recreational experience but there are many layers of our connection with nature and they are all legitimate. Growing things is important, for example. The more levels of connection we have with nature, the more benefits and values we obtain from it, ecologically as well as economically.

The Importance of Organic Growth

PN On my street in Fremantle, Australia, we have a guerrilla gardener who's redone all the verges of every house along the street. This was not allowed but he just did it because he wanted to see more nature—so he rebuilt the street as a rainforest.

It's quite remarkable how much cooler and attractive it is now. People love to walk down the streets. The Fremantle council let it happen; it also had a crowdfunding competition for the best ideas to develop parklets—little parks created by local people—and the best three or four received funding to be built. We now have parklets across our city. In New York, there are these little new parks created on empty blocks that the council buys and converts into more permanent features. I think the bottom-up approach to bringing nature back into the city has to be facilitated as much as possible.

SK Bottom-up approaches are slow and difficult for planners and government officials, but it is ultimately the only truly sustainable approach. Singapore is an exception because of the type of government, scale and geography. Architecture is important but most architects are hired hands—99% do what developers tell them to do. Based on the economics of development and the value system, it's a lot easier for developers to clear the landscape, put up a bunch of boxes quickly, and get a return on their investment for the investors who have no stake in the local economy. To change that, we need an enlightened government, which may be efficient in the short run but in the long term tends to be ineffective if people do not support what is advocated. Alternatively, we need a fundamental change in our value system—where people demand a different kind of built environment that ultimately drives development decisions. This is a difficult and slow process. But, that's where inspirational models of innovation become very important. It will take this kind of shift from the bottom-up to change the economics of development to produce a profound transformation in how we design and build the urbanscape.

Biophilia From The Ground Up

TB If we think about the experiences of other leading cities that have made great strides, e.g., places like Chicago, it's often the mayor making things work. Often a lot can happen when you can reach that mayor who can lead to a city-wide policy or programme that can have greater impact, not just a pilot project.

That said, I support the grassroots approach. There are a number of fantastic stories, like the innovative parklets in San Francisco. There were neighbourhoods where citizens had been trying to install sidewalk gardens, but there wasn't a sidewalk garden permit so it wasn't legal for them to do so. It took some activism to change the building codes, making it possible to legally plant a sidewalk garden. Lots can happen if we think about how to empower at the neighbourhood level.



“...the greatest power lies with us as we come up with ideas and projects that seed the future.”

Peter Newman

PN I've worked with the Premier of our state three times and the reality is the politicians are swayed by what others think. They are not going to get out there and say “we are going to create a whole new city” because they will not get elected; they will only get elected if they move along with the public.

Instead, the greatest power lies with us as we come up with ideas and projects that seed the future. Biophilia has to start from below. It's not going to come from the planner that produces a new city and drops it down there. It's going to come from below; it's going to come from all of our professions, our scientists and local government working away on how to come up with new sets of regulations, new kinds of facilitating, new ways of financing to enable biophilic urbanism to be mainstreamed.

Thinking Globally

TKS While it is valid to talk about nice little urban gardens, is it arranging the chairs on a sinking Titanic? If you had all the resources, what would you do? I think the first thing is to think of biophilia globally. What is the systemic issue? How do we solve the issue of the relationship between nature and human beings, between cities and countryside, between rich and poor, between monoculture and biodiversity? The previous Secretary General of ASEAN posed this question to architects and planners in our private discussion: “What are you going to do with 400 million poor people in Southeast Asia?” If you don't address that issue, you are going to face problems when they migrate and become refugees. City governments right now answer only to city populations.

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Stephen Kellert



The haze is a clear case. Are we concerned about the development of Sumatra and Kalimantan? If we are not, then we will have to breathe the haze. Should we not, in our own interest, invest in the infrastructural development of China or other places, to improve the livelihood of the rural poor so that they will not do what they are doing now? The issue is complex and goes beyond the biological field; it's a human issue. It's about the organisation of power and resources. Unless we develop the countryside, they are stuck because the export industries are in serious overproduction. The global economy is stagnated, and this is a global issue. This issue of economic stagnation is not going to go away because it is a structural issue. Unless we relate that to biophilia and how we organise human life, we are not going to solve the problem. I urge you all to think beyond the way we frame the questions of human relationship with nature and nature's necessities and so on. You have to think larger. My fear is you are not thinking big picture enough.

TB There are profound social injustices and inequality in the world. My notion of biophilic cities is one that understands these green interventions and connections with nature as part of uplifting and enhancing the quality of life for everyone. There are lots of examples from the developing world: from food producing



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Tay Kheng Soon


gardens on rooftops in Mexico City to the incorporation of nature to a favela, a redevelopment strategy programme in Brazil—ways that nature can in fact improve the quality of life for all.

TKS One other example is Mondragon in Northern Spain where the economy is co-operatively owned by 100,000 factory workers. They have achieved a kind of balance between their urban settlements and the surrounding natural environment and farms. For me the great inspiration is the Emilia-Romagna area in northern Italy, where the University of Bologna is in the centre of, where the urbanism is not the kind in New York or Singapore and yet there is tremendous quality of life, closely related to the food culture, agriculture, intellectual development, and the design culture. That's the kind of model of a rural-urban integration, which goes beyond the big city intervention we tend to think that biophilia is derived from. I think we need to scholastically look at other examples beyond the big city environments because the interventions in those contexts are actually quite puny. Cuba, for example, is a very interesting laboratory because of the blockade,

and yet they have managed to eke out a balance between the rural and the urban. Biophilia is not only about green walls and plants on the window sills. It has to go much beyond that.

Making Singapore More Biophilic

PN People in Singapore are living in a city with a whole series of complex projects. Let's jump in there and provide the option of putting biophilic urbanism into the design of any new building, garden and space, and show that that is the next future thing to do. If you can do that, you can change the world.

KSK I hope to see more efforts in our habitat and ecosystem restoration projects in our parks. NParks is already doing a fantastic job of creating biodiversity reintegration and species recovery programmes for the areas under their charge. For the architects in practice, whenever we can, we need to do that integration for buildings. Community engagement is important too, as well as management strategies. 

“My notion of biophilic cities is one that understands these green interventions and connections with nature as part of uplifting and enhancing the quality of life for everyone.”

Tim Beatley

Watch more here:



<https://www.youtube.com/watch?v=OKwLHrfgl8o&list=PLGKE0U1p8RxjMzvd4FDQVMAQXUaYVxRu4>