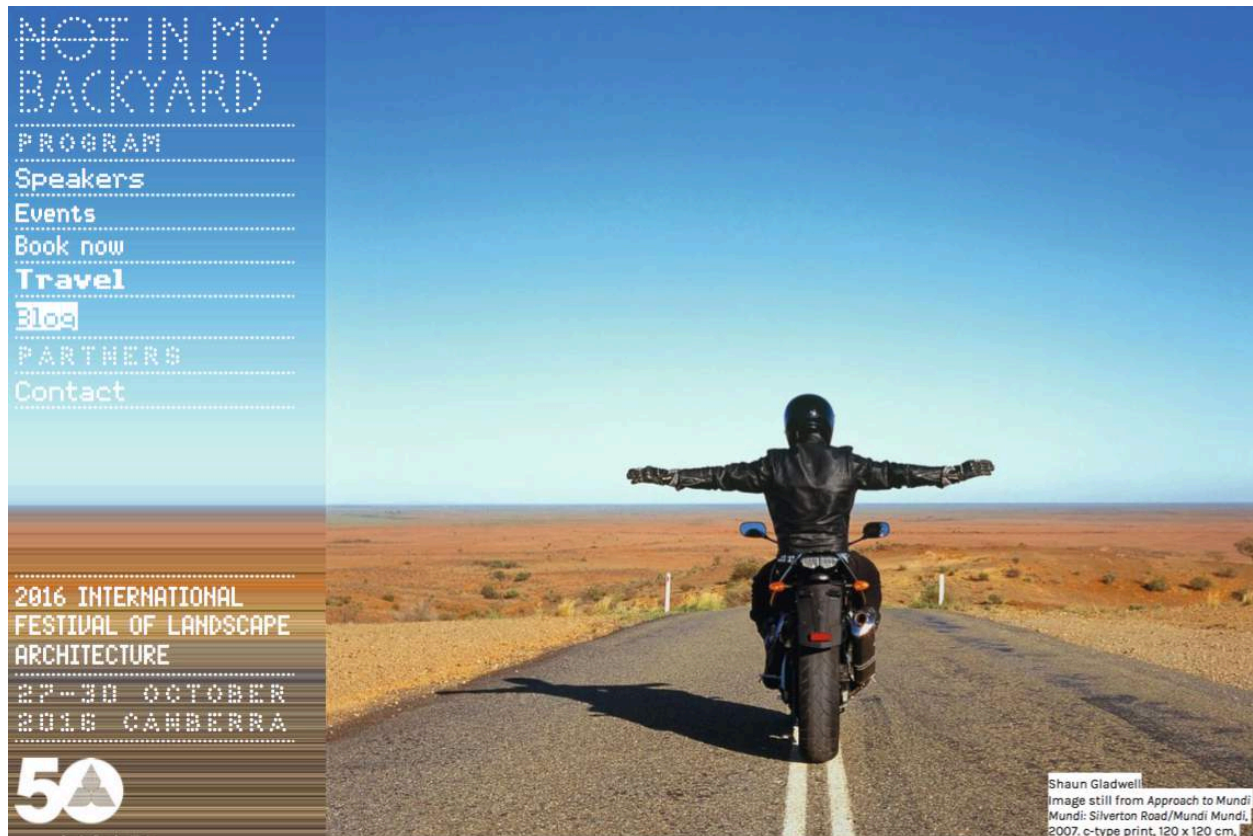


# OMG – THERE’S AN ANTHROPOCENE IN MY BACKYARD!

**Adventures into the profoundly frightening, deeply uncertain, and yet somehow incredibly optimistic landscapes of the Anthropocene.**

Keynote Address on the occasion of the 50<sup>th</sup> anniversary of Landscape architecture in Australia., Canberra, October, 2016.

Richard Weller



Those who started the profession of landscape architecture here in the 60s; Malcolm Bunzli, Harry Howard, Bruce MacKenzie, Ray Margules, Professor Lindsay Pryor, David Steane, Jean Verschuer, Gavin Walkley, and George Williams would, I’m sure, be delighted to know that there

are more than 600 of us here today to celebrate a thriving profession a profession whose relevance is becoming more, not less pertinent.



AILA Council, Adelaide, August 1971, from right: Beryl Mann (Melbourne), Jean Verschuer (Perth), Peter Spooner (Sydney), George Williams (Brisbane), Ronald Rayment (Melbourne), Malcolm Bunzli (Brisbane), Gavin Walkley (Adelaide), Richard Clough (Canberra). (photograph by Raymond Margules).

There are now hubs of landscape education in every major Australian city bar Darwin .....and the profession is actively involved in almost all forms of development and many aspects of conservation, nation-wide. The work being produced by practice is as good if not better than anywhere in the world and landscape architecture's value is now generally recognized by other related professions, if not society at large.

That old ruse “can you come over and *look at* my backyard” is no longer the first thing people say when they hear what it is you do. And that other old ruse “here's the plan, can you do the landscape” is also no longer the first thing architects or engineers say when you enter their boardrooms.

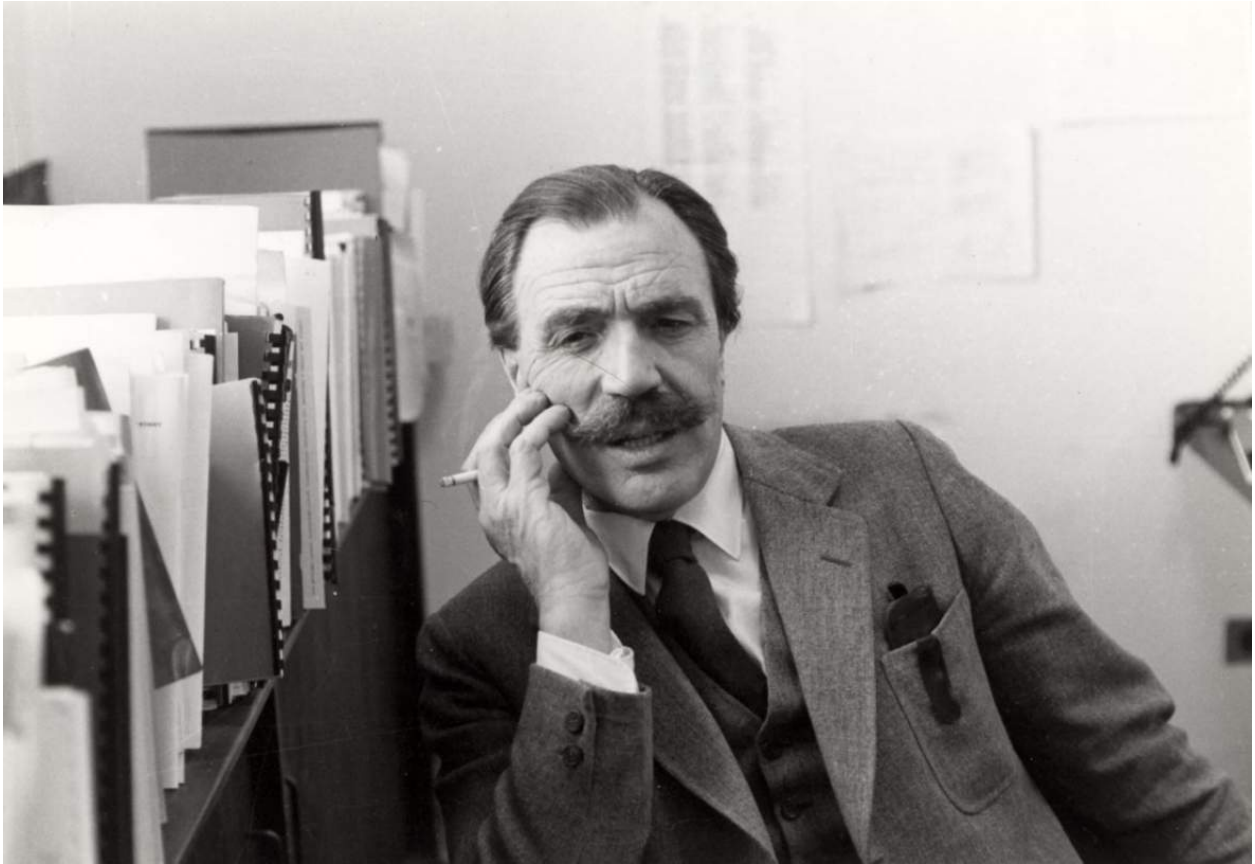
But 50 is also time to reflect - and we need to ask what - in addition to just growing a profession- have we really achieved and what are the main challenges and opportunities going forward?

If I had one sentence to sum it up I'd say for 50 years we have been predominantly trying to *develop place-based aesthetics and improve the ecological function of places.*

By place-based aesthetics and ecology I mean that above all, in the last 50 years the profession has been devoted to creating “a sense of place”. A sense of place is particular to landscape architecture as a design sensibility but it recurs throughout history as a form of romantic reaction to what MIT economist Joseph Shumpeter described so well as modernity's relentless process of “*creative destruction*”.

A sense of place found its most powerful voice and method when in 1969 Ian McHarg published “Design With Nature”, a book in which the landscape architect is portrayed as planetary steward – a book that has sold more than any other in the field. Incidentally its 50<sup>th</sup> anniversary comes up in 2019 so if you want to plan a trip to Philadelphia you might do so then.

So at the age of 50, the question the soul searching landscape architect must ask is *Have we achieved a sense of place and.... have we fulfilled the mandate of stewardship? And if not then why not?*



They are of course loaded and even somewhat irritating questions but they have to be asked, repeatedly.

The very ideas set us up for a fall: That is, if we seriously thought that recourse to a “sense of place” was able to resist modernity in general and its postmodern acceleration in particular - and if we seriously thought that landscape architects could somehow steward the global landscape during that great acceleration, then we were deluded.

And yet here we are - everyone craves some sort of sense of place and the world more than ever requires some form of environmental stewardship on a scale commensurate with the crisis.



So whilst we can and should critique both a sense of place and stewardship, for their superficiality and impossibility respectively, Landscape architecture is unthinkable without these grand narratives. And if you are genuinely interested in the field it is incumbent upon you to develop your own critical and philosophical disposition toward them - for without that the profession is a mere service industry, and design little more than following fashion.

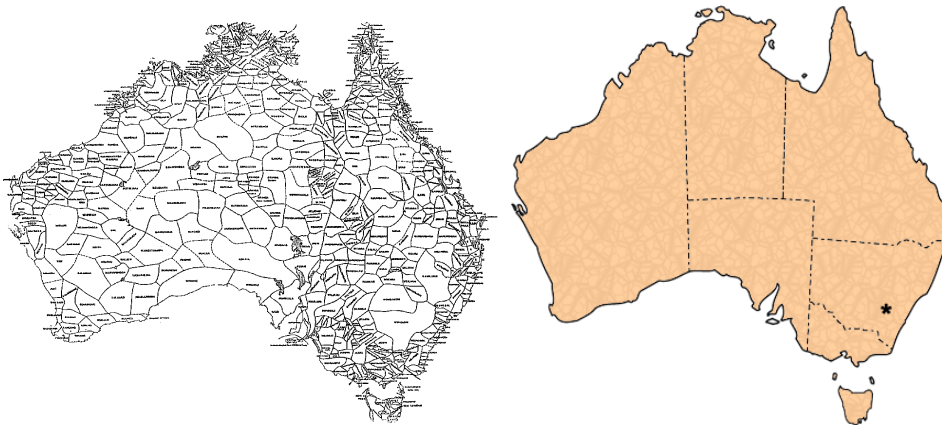
The beauty of landscape architecture and the distinct contribution it has to make is that it stays with these ideas. The question for me at least, is not if, but how.

In measuring our success over the last 50 years I'd say we've made big contributions to the inner city areas of rich first world cities but very little in regard to say; the destruction of the world's rainforests and if there is a pathway into an expanded field for the profession this century then it seems to me we need to more emphatically walk a line, or draw the connections between the two.



This line is what you might call landscape architecture's line of diminishing impact. As you go from first world rich city centers out to their suburbs, through the peri-urban, across the regional, the national and out into the international conservation landscape, our professional capacity and influence diminishes every step of the way and yet, this is precisely the time when it should be the opposite.

In relation to Australia (SLIDE) you could say that the line of diminishing impact runs, both actually and allegorically, out from Barangaroo, to the dark side of Uluru.



Here for example below, the budding landscape architect Paul Keating has certainly had maximum impact in reshaping an entire headland, but the aesthetics (to mention nothing of the politics) of Barangaroo's faux naturalism seems to me to mark a certain end point for Australian landscape architecture's project of creating a sense of place, ironically just a few kilometers across the water from where it more or less began with Bruce Mackenzie's authentic work in the 1970's.





No one is ever going to complain about grass and trees and sandstone on Sydney harbor...or anywhere for that matter and so as usual landscape architecture evades the aesthetic scrutiny we would routinely apply to any other art that makes implicit and explicit claims about land, culture and

identity – especially those that veil themselves in nature’s sweet robes and puts slim blondes in the foreground.

Not to mention African Americans in their Sunday best, a guy throwing an American football to no one and a mysterious man in a black coat with a black hat riding the same black bike in 3 different locations at exactly the same time.

But if a sense of place has become a thin, globally manufactured surface used to cover things up as much as open them up, then to be fair we must acknowledge that in regard to Australian cities landscape architects (along with others) have made an enormous contribution to reforming the public realm for the better.



Remember that merely 30 years ago there was no alfresco dining in Sydney. There were hardly any cafes, period. We would literally go to Melbourne for the novelty of drinking coffee in a Greek cafe on the street - and even Melbourne was pretty much shut after 5 pm.



30 years ago cities across the nation had been gutted by the wrecking ball. They were soulless, treeless and yes, placeless. Now our cities rank consistently in the global top 10 and much of that is to do with their rejuvenated public realms.

But such scores can also be misleading because they tend to presuppose that a very corporate and new urbanist conception of the city is the best of all possible worlds.

The substantive project this century will not be just the perpetuation of vibrant public space – in fact the public and the so called placemakers whoever they really are – have pretty much now worked out they can just “pop it all up” for themselves.

The future of substantial and interesting work for landscape architects lies in redesigning cities in terms of social justice and ecological performance. This means going deeper into socio political processes and harnessing and actively redirecting their internal forces to more just and more ecological ends.

It means understanding the city metabolically and systemically which in turn means not just working “in the old idea of the city as a place of many buildings and filling designated sites with design composition – it means tracking supply chains to the ends of the earth – identifying the relationality between where you and your project are in both space and time in relation to the sources and sinks that can be traced to it.

It means identifying points along those continuums to apply design intelligence with particular accuracy so that change might reverberate through the system. It means working with time more than space.

This ultimately means a correlation of planetary urbanism with the complexity and holistic nature of the earth system across all scales.

At least that's the theory.



And before you think I'm just swinging the old pendulum back from art to instrumentality, working with the ecological mechanics of the city doesn't mean we just apply the cold hand of reason — the evolution of planetary urbanism is not just a technical matter of performance metrics, nor is it a moralizing, punitive project — it is an artistic, critical and beautiful project.

The possibility of society becoming a constructive rather than destructive force of nature is as profound and poetic as it is practical.

I would add here, as an aside, that our pretenses to art and the turn to cultural studies since the 1980s, whilst necessary to counter the profession's anti-intellectual tendencies, has also had the negative effect of somewhat obfuscating matters and arguably served to alienate us from the political, economic and engineering forces that actually do shape the world.

In this regard, Landscape urbanism, now regrettably unfashionable before its main ideas have even been seriously tested - was an important correction.... and its ambition of elevating landscape architecture into the role of being the primary arbiter of the city remains in my opinion crucial to the discipline's 21<sup>st</sup> century ascendancy.

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What I want to do now is shift gear and lead into our Keynote by Clive Hamilton who's work concerns a question that undergirds or perhaps overshadows all those that we will ask and explore in the next 2 days of panels. That question is, *What is our sense of place in the Anthropocene?*

Of course every discipline, as Jedediah Purdy writes: sees the Anthropocene as a projection screen for its own self-serving interests but there is a strong case, I think, for the Anthropocene to be understood as the age of landscape architecture.

Why?

Because the Anthropocene is the age of 2 things - it is the age of humans *and* the age of holistic earth system science, and if you put those two together you get landscape architecture 101. Furthermore, the alchemy of the Anthropocene is all about how we mix carbon, water, soil, plants and concrete with the 4<sup>th</sup> dimension of time and these are the quintessential



ingredients of landscape architecture.

So as you all know by now, next year the International Commission on Stratigraphy is expected to formally say good bye to the halcyon days of the Holocene (the age of nice weather) and approve the fact that the Anthropocene Epoch began in the mid twentieth century and is a new geological period of environmental volatility defined by the fact that the earth system is now fundamentally altered and to a large degree determined by “the great acceleration” of human activity.

The philosophical and practical consequences, as Clive Hamilton will explain better than I can, couldn't be greater: in short, nature is no longer history's backdrop - no longer that ever-providing thing 'out there', nor is it victim, lover, mother, or other, it is a chaotic meta-system and it is, for better or worse, something *we* are co-creating both conceptually and materially.

Cartographically, the anthropogenic landscape is best illustrated by geographer Erle Ellis's global mapping of 'Anthromes' or what Richard Hobbs defines as novel ecosystems - landscapes classified according to their varying degrees of human modification.<sup>1</sup>

Through his maps and his writing, Ellis, as McHarg did 40 years earlier, argues that the “[r]ecognition of human beings' huge and sustained influence is now leading to a wholesale rethinking of ecological science and conservation that moves away from humans as recent destroyers of pristine nature and towards humanity's role as sustained and permanent stewards of the biosphere.”<sup>2</sup>

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<sup>1</sup> See: <http://ecotope.org/anthromes/> Last accessed June 1<sup>st</sup> 2016.

<sup>2</sup> Ellis, Erle, C. Using the Planet Global Change 81 32-5 cited in Hamilton, C et al. 2015. The Anthropocene and the Global Environmental Crisis: Rethinking Modernity in a New Epoch, London: Routledge, 25

We must, he continues, now work toward “*maintaining, enhancing and restoring the ecological functions of the remnant, recovering, and managed novel ecosystems formed by land use and its legacies within the complex multifunctional anthropogenic landscape mosaics that are the predominant form of terrestrial ecosystems today and into the future.*”<sup>3</sup>

But the allegory of stewardship that McHarg and now Ellis invokes seems way too pastoral for a world where people are now saying there may be no choice but to modify the chemical composition of the atmosphere and the oceans so as to mitigate global warming. In this new world, stewardship becomes ‘geoengineering’ effectively humans playing God and as Stuart Brand says; “Since we have become Gods we might as well get good at it”.

What Brand forgets, and what is truly terrifying about the anthropocene is that not all Gods *are* good.

The god-like geoengineering sensibility is being championed by the ‘Breakthrough Institute’ of which Brand is a member. To considerable fan fair (and criticism) the institute launched its so called ‘Eco-modernist manifesto’ in 2015.<sup>4</sup> In the great American tradition of spinning crisis into opportunity, the manifesto envisages and promotes the conscious creation of what it refers to as the “*good Anthropocene*”.

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<sup>3</sup> Ellis, Erle C. 2014 “Anthropogenic Taxonomies: A Taxonomy of the Human Biosphere,” In Chris Reed & Nina-Marie Lister (Eds) *Projective Ecologies*. 2014. New York: Actar Publishers, 179.

<sup>4</sup> <http://www.ecomodernism.org/manifesto-english/> Last accessed June 1<sup>st</sup>, 2016.



A MANIFESTO TO USE HUMANITY'S  
EXTRAORDINARY POWERS IN SERVICE OF CREATING  
A GOOD ANTHROPOCENE.

This, they say, will emerge sometime this century through a process of ‘decoupling’ humanity’s negative impacts from the environment via the agency of ever-advancing technology. ‘Humans’ they declare will *“have the opportunity to re-wild and re-green the Earth — even as developing countries achieve modern living standards, and material poverty ends.”*<sup>5</sup>

For them - and this is a key point - this arcadian future is just an intensification of historical processes already well underway. And as we slide inexorably into the oblivion of climate change, the techno-utopianism of the ecomodernists is somewhat refreshing...

But it’s also, alarmingly ahistorical and oddly naïve.

For its critics such as Clive Hamilton, the ecomodernists - along with their geoengineers (SLIDE) and perhaps in the future their landscape architects, are just promoting scaled-up versions of the very

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<sup>5</sup> <http://www.ecomodernism.org/manifesto-english/> Last accessed June 1<sup>st</sup>, 2016.



attitudes and practices that got us into this crisis in the first place.<sup>6</sup>

But this critique overlooks, or seems to overlook the fact that we have already re-engineered the earth system....albeit relatively unconsciously. It also presumes that if we somehow could back off from manipulating the world at such a scale, it will somehow self-correct. Indeed, it will adjust, as does any chaotic system, but it will do so in its own earth time and in ways that might not be at all good for billions of humans alive now and billions yet to be born.

By the same token, as those billions exercise their right to lift themselves out of poverty by burning fossil fuels, climate change also isn't going to be good for them.

For Clive the Anthropocene is not just an engineering problem, and nor is it just a continuation of history - it's a Copernican revolution or as he puts it a rupture, requiring far more radical and fundamental revisions of what it means to be human and along with it a fundamental reorganization of society.

Indeed.... but the question then becomes: if we reject the eco and the modern in the way the ecomodernists are putting the two together then what can we imagine in its stead? As Fredric Jameson famously quipped *"its easier to imagine the end of the world than the end of capitalism"*.

In terms of the ecomodernist debates, Peter Karieva - former Chief scientist for the Nature Conservancy is provocative in that he not only believes it can but he also believes capitalism and environmentalism can work this out together.

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<sup>6</sup> Hamilton, C. The Anthropocene as rupture. *The Anthropocene Review* 1–14, 2016

Just as McHarg did, Kareiva sees the contemporary landscape as a design and planning problem: “...fences, limits, and faraway places only a few can actually experience is a losing proposition”<sup>7</sup> he writes....Instead, “[c]onservation should seek to support and inform the right kind of development - development by design, done with the importance of nature to thriving economies, foremost in mind.”<sup>8</sup>

Riling the deep ecologists, he says that “[i]nstead of scolding capitalism, conservationists should partner with corporations in a science-based effort to integrate the value of nature's benefits into their operations and cultures. Instead of pursuing the protection of biodiversity for biodiversity's sake, a new conservation should seek to enhance those natural systems that benefit the widest number of people, especially the poor.”<sup>9</sup>



So as we overlook the neoliberal, ecomodernist conservation

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<sup>7</sup> ibid

<sup>8</sup> ibid

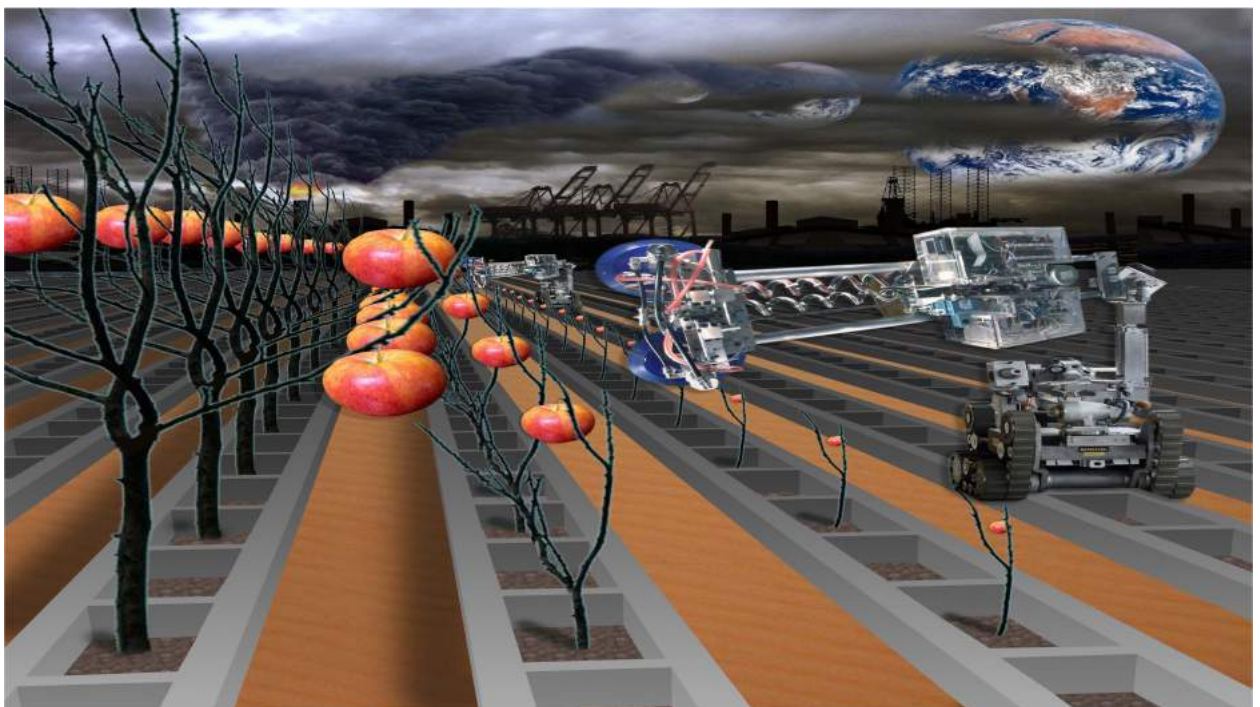
<sup>9</sup> Kareiva, P., Marvier, M., & Lalasz, R. op cit.

landscape, we must ask: Where are the poor? In fact, this is a good question to ask every time you see a landscape.

So, where, in the image of our rationally planned, techno-Gaian future are all those that modernity has thus far so thoroughly failed.

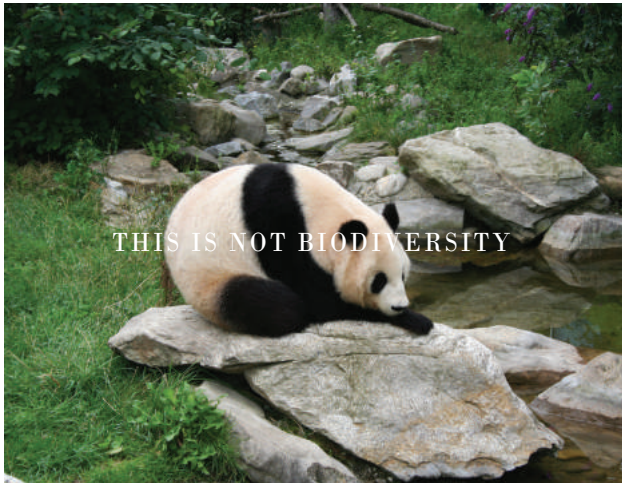
What exactly are they doing? What will they do?

Can the global peasantry - the billion or more who won't make it into the 'age of urbanization' - be put to work on projects of global ecological restoration (SLIDE).....while robots work the farms?

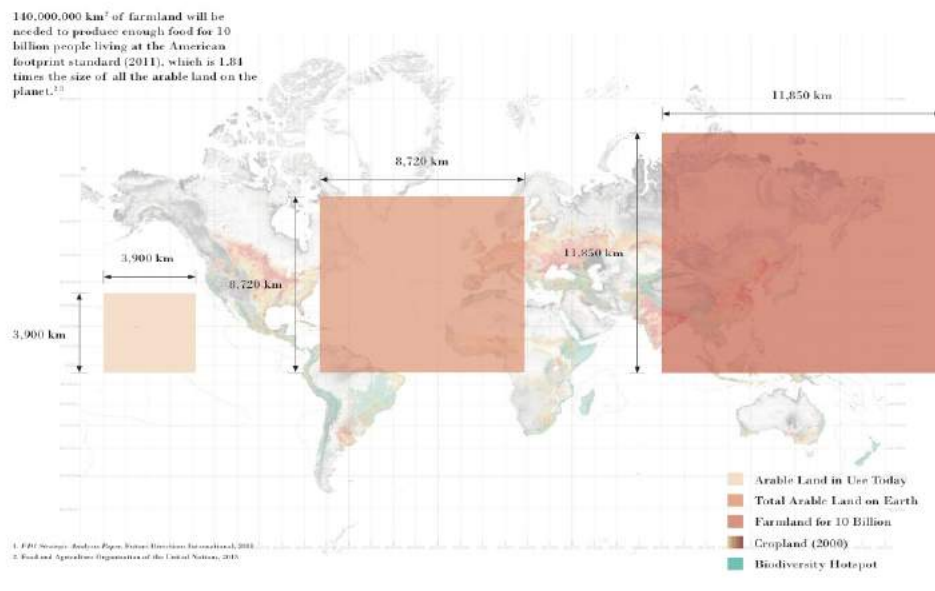


The big problem at the landscape scale this century will be the fundamental tension between biodiversity, food production, and climate change. And by biodiversity I don't mean charismatic megafauna I mean the billion or so bacteria in a spoonful of healthy soil and the robust ecosystems of all the unnamed species such soil supports.





To illustrate this tension, on this world map you see three squares. The first and smallest is the world's current crop land. The second, in the middle, is current crop land plus current grazing land plus what is thought to be the world's further supply of potentially arable land a total of 50 per cent of the earth's ice free surface area.



50 per cent of the earth's land left over for ecosystem services seems like a lot but you need to remember that circa 33 per cent of the earth's terrestrial surface is desert - land by definition not suited to forestry or biodiversity. So this leaves only 17 per cent for other uses - precisely the amount the United Nations is trying to secure as protected area by 2020.

The bigger square on the right is however *the problem*. It shows the foodbowl necessary to feed 10 billion people.... The UN is now forecasting anywhere between 9.5 and 13.3 billion by 2100 so 10 billion is a conservative estimate.

The 10 billion consumers we've scaled this food bowl to are like us - that is; people who shop in supermarkets and eat more or less whatever they want, whenever they want, people with an average food footprint of 1.4 hectares each. 10 billion people like us would require a whopping 93% of the earth's ice-free terrestrial surface.

In this case not only would all the world's arable land be used for agriculture but so too would the world's deserts, plus some. After we've finished our pies, a mere 7 per cent of the earth's terrestrial surface would then be left for biodiversity - essentially a mountainous zoo in the midst of a global monoculture of corn and cattle, hooked up to global array of desalination plants. The nitrogen, phosphate and carbon loading of such a world is truly frightening.

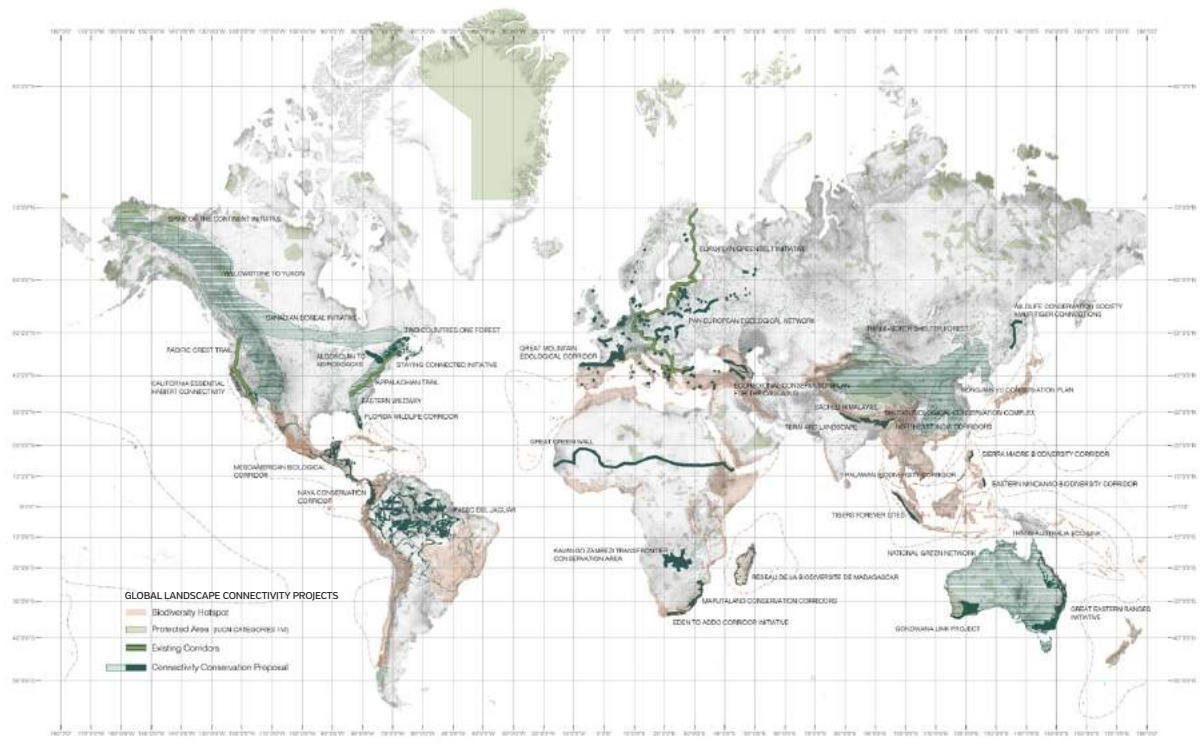
Incidentally, the world's total arable land - the middle square will only support 5.4 billion eating as we do.

These proportions of immanent land-use could change when global population drops, as it probably will in the 22<sup>nd</sup> century due to socio-economic influences associated with urbanization. The other big change

would be if the bulk of food production shifted to the oceans, and/or if meat could be produced independently of ruminants entirely.

Then, ecological restoration, or what the Breakthrough Institute has called “decoupling” could take place on a scale commensurate with that which is needed to partially correct the Earth System’s current imbalance.

The trick, if I can put it that way, will be to get through this century’s incredibly tight ecological bottlenecks and come out the other end with some ecosystems at least partially intact and then as global population stabilizes and we transition to new energy sources, we can begin what the distant future might come to know “as the great reconstruction”.



In fact this has already begun: On this world map you see all the major landscape restoration projects going on around the world today.

This is extraordinary for the first time in history, in the age of planetary urbanization we are also treating the world as a garden and starting to curate it as such.

There is a future for landscape architecture at this scale especially as the United Nations Convention on Biological Diversity requires its 196 signatories, one of which is Australia, to restore and protect 17% of the world terrestrial area, by 2020.

And this land can't just be some lumpen mass in Siberia according to the convention it must be representative of the world's 867 ecoregions. Not only that, the land that is protected must be connected - not an archipelago of fragments as you see on this image of the world's existing protected area.

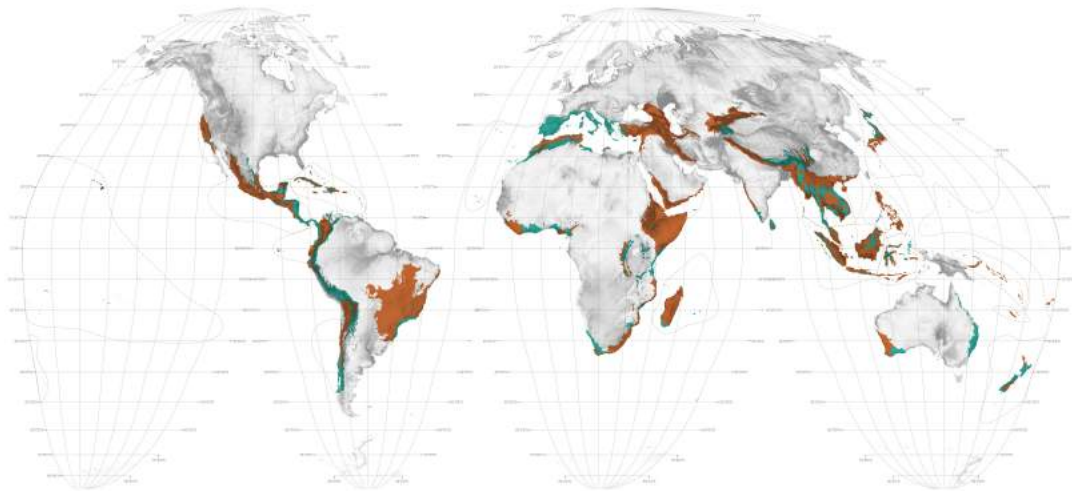
The current protected area is 15.4 % of the earth's terrestrial surface. So from a global perspective we only need to secure an additional 1.6%. This seems paltry but it's actually close to 700,000 Central parks.





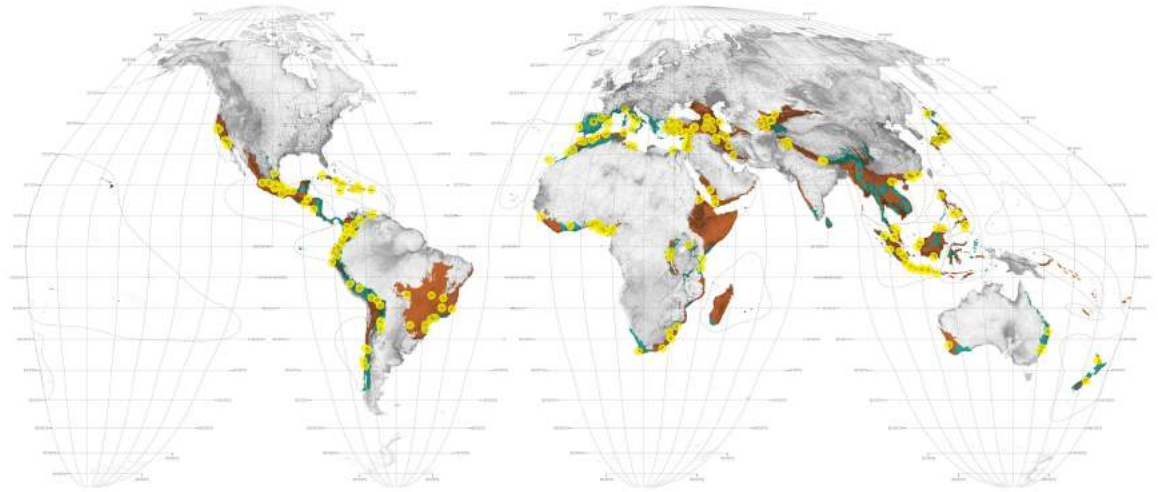
In a research project I've conducted at Penn with Clare Hoch and Chieh Huang, we've been asking where should these 700,000 central parks be.

The answer, we think, is in territory that supports the world's most valuable genetic diversity—the 35 biological hotspots shown on this map in brown. The audit that we've conducted of these landscapes reveals that 21 of the hotspots are well short of reaching 17%, and when you break it down further in to their constituent 391 ecoregions, 221 of them fall short. On this map green areas have met the 17% target brown have not.

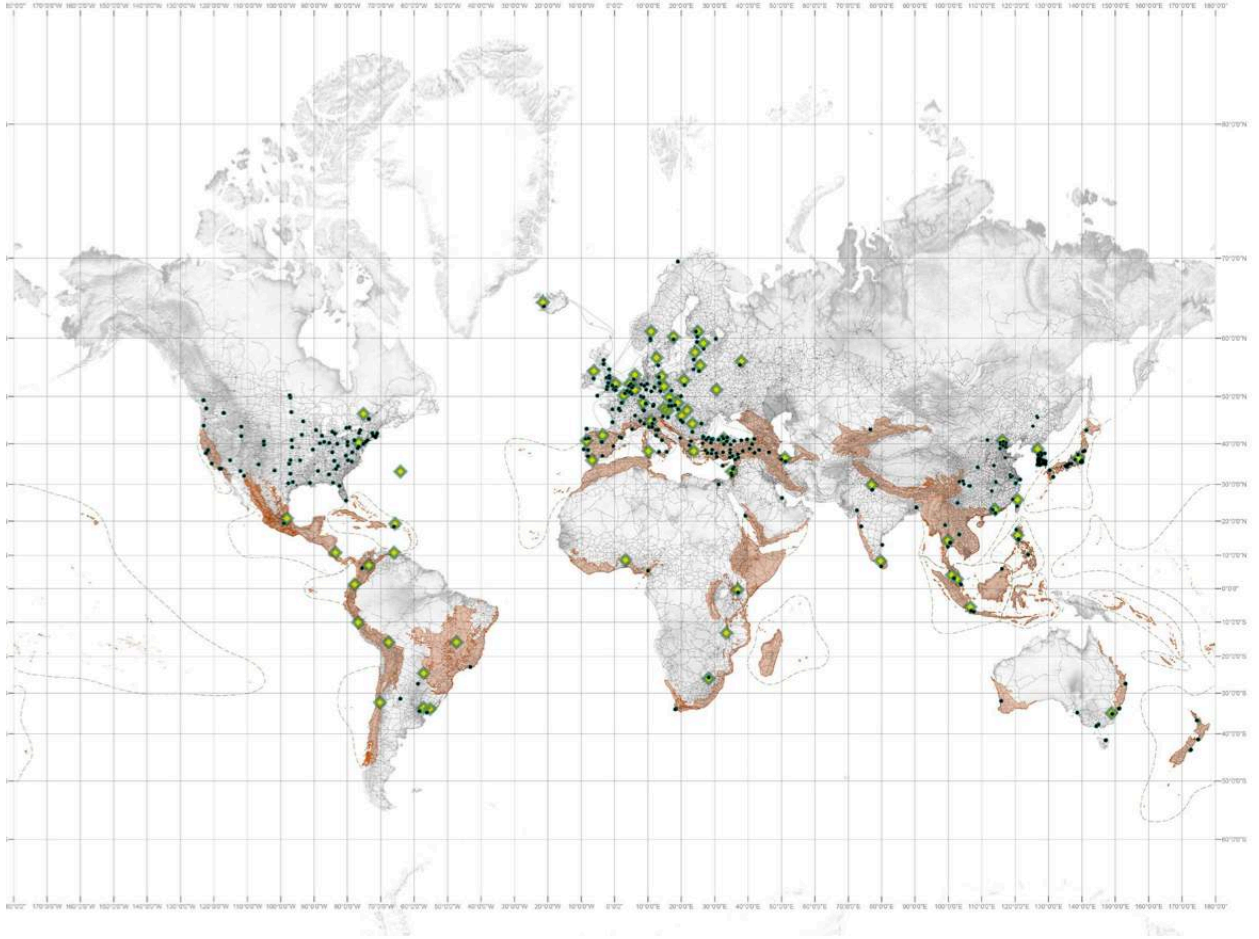


What is also of interest is how the cities in these territories are growing. Our analysis concludes that of the 420 cities in the hotspots 383 of them, highlighted on this map in yellow are sprawling directly into remnant habitat—habitat that supports the world's unique and by

definition irreplaceable biodiversity. There is almost no planning of these cities and similarly no regional landscape planning.



This is reflected on this map below by the green dots which locate schools of landscape architecture.



The diamond shapes indicate the location of the conservation NGOs. As a discipline and profession Landscape architecture has to grow its capacity in the global south, in particular in the hotspots. In fact there should be a globally coordinated design research program in these regions as soon as possible.

So with that light introduction, as advertised, welcome to the profoundly frightening and somehow incredibly optimistic landscapes of the Anthropocene.

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