

Questioning Tenets of Landscape Architecture

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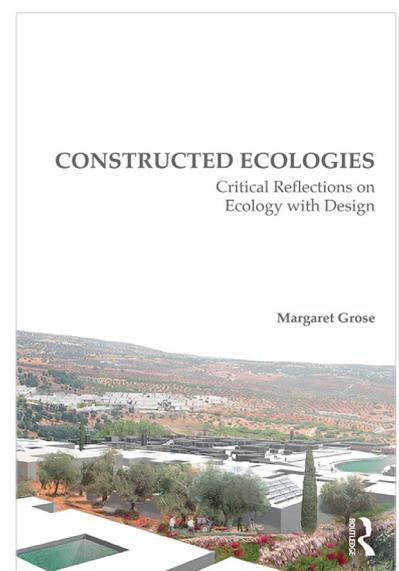
Constructed Ecologies: Critical Reflections on Ecology with Design, Margaret Grose, Abingdon, Oxon: Routledge, 2017, ISBN: 978-1-138-89021-3 (hardcover); 978-1-138-89022-0 (paperback)

Constructed Ecologies: Critical Reflections on Ecology with Design is a critical narrative that questions long-held beliefs and ideas in landscape architecture. According to Margaret Grose, our foundational knowledge in landscape architecture has shifted from horticulture to ecological systems, requiring some updating of our scientific understanding and viewpoints. While some may adhere to a love-hate relationship between landscape architecture and ecological science (Hofer, 2015), Grose sees the importance of building a stronger relationship between theory (ideas) and data (evidence) to inform our future thinking in the discipline and profession.

Grose expands the debate about how ecological science can help with inquiry and uncertainty in designing and constructing places for the future. She does not attempt to describe how landscape architects should implement such *constructed ecologies* in landscape planning and design, as Wende (2018) suggests. Instead she prompts us to compare, reflect on and rethink our prejudices and constrained views about the practice of landscape architecture for our own purposes.

Constructed Ecologies is a collection of five essays. The first, 'Global Differences, Not Universals', introduces new notions of *spectrums of responses*, *shifting continuities* and *shifting places*. *Spectrums of responses* refers to facilitating a wide range of planting design responses for genetically diverse organisms to be selected based on their evolutionary histories and adaptation capacities. *Shifting continuities* concerns the survival of plant populations in changing environments and challenges our entrenched views about natives and non-natives; conservation and restoration; monocultures and 'rewilding'. Grose gives us a fascinating and thought-provoking journey through hemispheric differences and points out where plant dispersal, holdouts and refugia facilitated the persistence of species locally during broad-scale climate change. *Shifting places* asks us how we might assist plants to shift site by site through design practice and conservation. This essay gives us much to consider in asking us to replace our perception of stable places, climates and plant populations with a less stable world of migration routes, fragmented landscapes and heterogeneous spaces. It was a captivating essay for me.

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In the second essay, 'Shifting Adaptabilities, Not Static Concepts', Grose begins with a discussion of a gob-smacking 11 new species and four new genera of hominin or humans discovered through fossil findings, molecular genetics and climatology. Based on other scholarly work, she argues that climate variability has been a catalyst for the evolution of human behaviour and culture. A fascinating concept is the idea of soft inheritance where our environment could determine the functioning and expression of genes passed down from one generation to another.

Discrediting the long-held savannah theory that humans have a preference for one particular type of landscape, Grose posits that human minds have been shaped by the many and varied environments to which we have been exposed. Our behavioural flexibility, she argues, has allowed us to think about and adapt to a wide range of habitats through shifting adaptabilities rather than static landscape preferences. For this reason, by necessity, rural dwellers are able to move to urban environments, one nationality can emigrate to another country and humans continue to explore frozen continents, marine depths and the solar system. The extent of this adaptability is quite remarkable when you think about it.

The focus of the third essay, 'Multiple, Not Solo Voices', is on *design georgics*, which encompasses 'things of the farmer' or developments in agriculture, one of the most significant *constructed ecologies* worldwide. Grose challenges landscape architects to reimagine and redesign agricultural enterprises, in particular the farm, which is especially relevant to those of us in New Zealand and Australia where food exports are the fastest-growing industries of our national economies. Landscape architects are frequently involved in so-called urban 'agriculture', or perhaps civic greening, but Grose asks us to consider whether vegetable gardens in urban areas are ever going to address the world's food crisis – that is, to feed a projected 10 billion people in 2050.

Big-picture food production systems in rural communities could become part of the focus of landscape architectural rural design studios on how to increase production from agricultural landscapes around the world. Multiple voices are needed to address the loss and mental health of farmers; soil depletion; loss of native and crop biodiversity; fragmentation of habitats for migrating regional species; and management of big data – to name just a few. Grose argues that designers and young farmers could make a significant difference to agrarian landscapes in the coming decades.

The fourth essay, 'Inquiries, Not Assumptions', questions our assumptions about lighting up the night in urban areas. Grose explains how it affects human health, ecology, crime and safety, new technologies and urban design. Of course, it helps to know a little about the physics of light: after giving us a basic understanding, Grose presents a fascinating narrative that starts with new knowledge about ecological effects of artificial night lighting on street trees, animal reproduction, the human circadian system and consequently our physiology, metabolism, health and behaviour.

Her argument about moving our understanding of the purpose of public lighting from 'public safety' to 'community health' is compelling and very much part of the landscape architecture realm. She cites scholarly work that refutes the old assumption that lighting prevents crime and shows that, to the contrary,

lighting increases crime by assisting criminals. LED lighting of signage and streets is increasing both glare and low colour temperature in the name of energy savings. But are alternatives available? Well, apparently they are and we have been caught napping under outdated assumptions and beliefs.

Finally, in ‘Thinking Backwards, Not Forwards as a Linear Narrative’, Grose discusses shifting our design processes from forward problem solving to thinking backwards or backcasting to address inverse problems. She suggests we first find a solution or a vision for the future and then work out how to get there from where we are today, rather than starting with an analysis of the problem today and working out what the future state should be. Daylighting of waterways is given as a classic inverse problem. The outcome is known but the ways to achieve that outcome can vary. Grose posits that this approach is in line with current science research. This design–science commonality suggests the value of expanding evidence-based practice. If you are not interested in data and evaluation, then this essay may not be for you. If you are, then working with data may just increase the scope of our collective imagination.

In my view, Grose adeptly presents landscape architects with strong criticism of our long-held beliefs and assumptions. She makes us consider work scholars are undertaking in allied fields that we may not have accessed. Most significantly for me, she points to interesting areas of specialisation for our emerging practitioners and educators. This is a book that I highly recommend.

REFERENCES

Hofer, W (2015) Perspectives on Ecology and Design, *Topos*. Accessed 8 September 2019, www.toposmagazine.com/perspectives-on-ecology-and-design/

Wende, W (2018) Constructed Ecologies. Critical Reflections on Ecology with Design, *Journal of Landscape Architecture* 13(1): 80–81. DOI: 10.1080/18626033.2018.1476043.