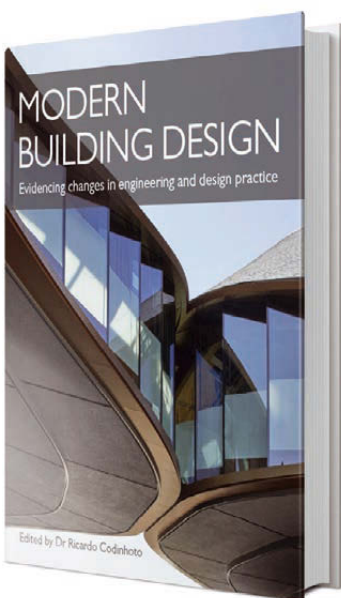# Review

Matthew Wells enjoys this polemical collection of essays on the future of building design.

Modern building design: Evidencing changes in engineering and design practice

Editor: Dr Ricardo Codinhoto
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THIS BOOK IS A LOOSE COLLECTION of essays by seven contributors as well as the editor, Dr Ricardo Codinhoto. Topics include the morality of building, design management, building information modelling (BIM), performance simulation, multidisciplinary facade design, place and well-being, circular economies and integrated approaches to design education. It originates in the extension of a University of Bath Master's degree intended to promote better integration of education, research and practice.

Forewords and introduction set up a polemical text organised around the concept of *defornocere*; that we should re-centre our aesthetic response to modern buildings around their malignancy – ugliness appearing in harmfulness.

Conscientious moralising must be good and the focus here on Northern European practice, taking the plank out of one's own eye before looking to save the world, also appears admirable. That buildings are essentially benign, extension theories positing that they increase and enrich our humanity here on earth, admitting a far, far broader understanding of aesthetics, is simply passed over.

'Evidencing changes in engineering and design practice' proceeds with a discussion of management tools applied to the design process. Academies have histories and this one's of integrated design and multidisciplinary practice. Like junk DNA, this gets reactivated in various places throughout the read. It would be good to approach what makes design a different discourse from other manageable endeavours.

The information explosion and time freedom now granted to consultants surely mean the community of specialists and design teams of disparate individuals must give way to more fluent, flexible, well-supported generalists needing managing in completely new ways.

Across the sections there emerges a fundamental split in objectives. Is modern design about energy use or about the management of information? Is energy to be reduced or is information to be increased, design time minimised and reuse maximised, or instead complete control exercised in a kind of reverse entropy process, everything becoming more and more complicated, refined, nuanced?

This conflict is most easily detected in the chapter on circular economies. Doubts about the value of the concept are expressed within the text itself and this makes for a subtler treatment than elsewhere. I am a carpenter and I am presented with a piece of wood. Do I leave it alone, spike it into a stud wall for my counterpart to do the same in the future, or do I use all my art and skill to make something of it? Why shape a component for reuse when the future is unknown and belongs to someone else anyway? Innovation or everything reducing towards the Roman ideal of a perfectible, prescribed present?

Perhaps we don't have a moral obligation to use materials sparingly. We are here and it's all for us. Rather we have a legal obligation not to misuse things, anything at all. Profligate developers should not be taxed, but they should be sued for every ounce of wasted opportunity belonging to someone else's future.

The sections on design tools mix descriptions of specific initiatives with general concerns about their deployment. It is recognised that the claim for computer-aided design efficiently reducing design time is the great betrayal of our age. It's here to enable and enhance our processes not to supplant or reduce them.

The discussion on BIM is particularly good, developing the misunderstandings and limitations of the approach, what it is and what it isn't yet and what it won't be. The organisation and efficient treatment of information – design and construction information. Construction becomes the seamless conjunction of information and material, even to the extent of just being hired over and over.

The usual appeal is made for simulation techniques to be deployed earlier and earlier in the design process. The problems of over-simplification, over-exactitude, reliability levels and machine-generated solutions being unable to address conditions of uncertainty and incommensurables are not addressed in any depth. The resolution of incompatible objectives as referred to in the text put me in mind of the definition, I forget from where, of architecture being the resolution of conflicting demands *onto a higher plane*. That last bit is missing from this book.

So the book is in several minds. Therein lies its strength, and the conceptual space set up between the various treatments leaves the reader plenty of room to speculate on the future of building design, the deployment of new tools and the transformation of information as it is manifested in built form. It's enjoyable and timely, part of the general thrashing around to find something upon which to ground contemporary design.

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Matthew Wells is a structural engineer and registered architect. He founded the consultancy Techniker in 1993 to approach the widest range of design problems. His particular interest is in developing the interface between structural design and architecture.