

[Lean Logic: a Dictionary for the Future and How to Survive It](#)

by David Fleming

Review by Chris Dixon, extracted in Permaculture magazine, Winter 2016

Dr. David Fleming, born in 1940, was an independent thinker and writer on environmental issues, based in London, England. He was one of the whistle blowers on the possibility of peak oil's approach and the inventor of the influential Tradable Energy Quotas (TEQs) scheme, designed to address this and climate change. He was also a significant figure in the development of the UK Green Party, the Transition Towns movement and the New Economics Foundation, as well as a Chairman of the Soil Association. Fleming worked on the Dictionary for some 30 years and died in November 2010; Lean Logic was published by Chelsea Green Publishing in September 2016.

This is a substantial book, in more ways than one. At just over two inches thick, with some 623 pages, printed on recycled paper and with a reassuringly solid, cloth bound cover, it is made to last, reflecting the principles of the Lean perspective that the dictionary contains.

The book opens with a short guide to Lean Logic presented as questions with suggested entries in the dictionary to check out for the answers. An introduction then gives an overview of the work-based origins of Lean Logic and its application to future scenarios of energy descent and climate change, and some key concepts, followed by an informative and somewhat darkly humorous section on how to cheat in an argument. The next section contains the dictionary itself, followed by some 75 pages of notes and 22 pages of bibliography.

The Lean perspective originates from the Lean Production systems developed in the 1940s at a Toyota factory in Japan; it maintained low back-up stocks of parts and finished goods, and that forced the whole productive process to develop rapid reactions and to achieve very low rates of error. This in turn meant that workers had responsibility for taking timely decisions in response to local circumstances, forestalling errors rather than waiting for them to happen.

Since then lean production has evolved into the more broadly based system of management known as lean thinking, the guiding principle of Lean Logic. In the Dictionary, Fleming applies Lean Logic to a future scenario (not a forecast, he insists) of more or less rapid energy descent and climate change (the Climacteric), covering similar ground to David Holmgren's Future Scenarios (available as a book or online at www.futurescenarios.org), though in much greater scope and detail.

The Lean perspective is very evident in that many words you look up in the dictionary will steer you towards a Lean entry; so Permaculture takes you to Lean Food Production. The L section is therefore quite full, including Lean Building, Lean Culture, Lean Defence, Lean Economics, Lean Education, Lean Energy, Lean Food, Lean Health, Lean Household, Lean Law and Order, Lean Materials, Lean Means, Lean Production, Lean Social Security, Lean Society, Lean Thinking, Lean Transport and Lean Water.

The guide to using the book suggests various approaches, including dipping in and just following threads. Initially I found this frustrating and hankered for a more straightforward presentation explaining the various aspects of Lean thinking in a clear linear sequence of chapters.

However, all that was blown away when I started to dig in to the entries themselves and pretty soon I was hooked and have been following diverse strands every day since I started, devouring an increasing proportion of this substantial text – the dictionary has grown a small thicket of bookmarks reminding me what to follow up next.

The entries are marked by great clarity of thought in the explanations of ideas and concepts, processes and connections. Entries range in length, some being relatively short, such as Lean Society:

"A social order whose *cohesion is sustained by its *community, and not by the market. It consists of a *panarchy of social groups, ranging from the small *household group, through the close *neighbourhood and *parish to the *nation". (The asterisks mark other entries that reveal further layers of detail and meaning)

Other entries serve almost as stand-alone essays of half a dozen pages or more on single topics such as Climate Change, the Climacteric, Complex Systems (and complicated systems), Community, Economics, Lean energy and others, though even here, the use of asterisks preceding words that have their own entries emphasises the connectivity of the information. The clarity and depth of Fleming's thinking reminded me of the work of David Holmgren, who Fleming refers to several times, and both of them acknowledge the work of Howard T. Odum on energy flows in systems, so there's a solid basis in physics and science generally. Coupled with this is the thoughtful presentation of more ephemeral concepts such as trust, loyalty, compassion and play, which Fleming sees as having pivotal roles in the future. There's also a good sense of humour laced with a recognition of the irony involved in much that is going on today, which keeps it all from becoming too heavy going.

As I continued to follow routes through the dictionary it dawned on me that Fleming had chosen the form of a Dictionary for specific reasons. The challenges presented by the future scenario he envisages are many and various and will inevitably include totally unpredictable events, making simple linear planning futile. So, much like Permaculture design, Lean Logic presents a strategy, or the thinking tools that will lead to appropriate strategies, depending upon ever-changing circumstances, and hence ever-changing threats and opportunities. The choice of the Dictionary to present the information encourages the broad, pattern-based approach to complex issues that many of us will be familiar with from Permaculture design, emphasising

the connectivity and inter-relation of topics we might normally consider to be separate, rather than the narrow, linear thinking that has got us where we are now.

Having said that, reading through the Lean entries does give a good overall view of the territory, though you will be tempted to follow up many interesting sidelines on the way, and some of these will prove more than just interesting

The material covered is realistic, as in raising specific issues that are likely to be thrown up by the massive challenge that energy descent scenarios reveal, such as the loss of power to nuclear waste storage facilities. There are some areas that Fleming will not go into in any detail, notably around the possibility (probability?) of some extreme violence. He does hint at the dark secrets of combining population growth with food scarcity. This may well be for the best and he gives his reasons; we will have to face those challenges as and when they occur. Fleming concludes the entry on Lean Defence, very honestly, with:

"Lean defence, then, is here in the room - large and unavoidable, an unwelcome need and commitment. So what do we do? Well, first of all, don't rush. The first, and proper response is - do nothing. Instead, enter the space of *thought, love, *reason, *recognition, friendship, *ignorance, *presence."

As ever, following up the entries marked with an asterisk provide further insightful comment.

Lean Logic can be considered to be, like Permaculture design, a movement towards an integral perspective: that is, a perspective that is able to contain, and rationally explain, many different perspectives. So Lean Logic incorporates Permaculture into itself as an example of a Lean system of food production. In a similar way, Fleming is able to quote examples of Lean Logic and thinking stretching back into our early history, even though the originators of these ideas would not have been aware of the concept as such.

Of course, I might, as an integral Permaculture designer, incorporate Lean Logic into my design repertoire as a thinking tool and this points to some inevitable holes in the dictionary; no mention is made of Ken Wilbur and his work on integral thinking for example, or Clare Graves' Spiral Dynamics, the evolution of human cultures and societies - both of which I would consider to be essential entries in a dictionary of how to survive the future. It is not clear how much Fleming collaborated with others over compiling the dictionary but there is the sense of a life's work here.

It is not a book that I would have thought of buying, but having had the chance to immerse myself in it I consider it a candidate for the half dozen or so physical books that I would consider likely to be extremely valuable in a post oil, post internet (sorry, Fleming thinks it will be unlikely we'll be able to keep it going) future scenario.

Chris Dixon: from

<http://www.permaculture.org.uk/user/tir-penrhos-isaf/profile>

I first came across Permaculture in the early eighties from Andy Darlington (now in the Pyrenees) and Eurig Ap Gwilym, a Dolgellau based natural forester who worked for Robert Hart; Eurig told me about Robert's plans to set up a forest garden. Together with Lyn, my wife, I bought 7 acres of land in Cymru (Wales) in the Dolgellau area in 1986 and studied Permaculture Design extensively from the late eighties, convening a design course in 1991 led by Andy Langford. We have been implementing a Permaculture design on our site, Tir Penrhos Isaf, ever since. I gained my diploma in Permaculture Design in 1993 and spent three years on the Permaculture Association (Britain) Council of Management, one year as chairman.

I have taught on a wide variety of Permaculture courses both locally and nationally, working alongside people such as Andy Langford, Steve Read, Mike Feingould, Chris Evans, Bryn Thomas and Peter Harper among many others. I attended a course led by Bill Mollison at Ragman's Lane Farm in 1990 and managed to get David Holmgren to lead one here at my home in 1994.

I write fiction and non-fiction, including one novel, and had work published in a variety of magazines. I was an Associate Editor of "Permaculture Magazine" published by Hyden House from 1993-1997.

I initiated a wilderness regeneration project at Tir Penrhos Isaf right at the start (1986) which is now into its 24th year and have observed and studied the processes of wilderness regeneration in depth; this work has provided me with many insights into the design of productive systems.

<http://www.konsk.co.uk/design/regen.htm>

More about [Lean Logic](#):

<http://www.flemingpolicycentre.org.uk/lean-logic-surviving-the-future/>