rather useful but, in practice, the first sentence of that explains one jargon term ('a literal') in terms of another ('an atom') and gets more involved from there. Not starting far enough back is a more surprising issue for the first, 'overview' chapter. While collating useful references, this misses the opportunity to present an overview of any of the various things that (computational) systems biology might mean, or indeed of the rest of the book. This could be an issue when many would-be readers' understanding of computational systems biology derives, directly or indirectly, from Kitano (e.g. Kitano, 2002), with his emphasis on biological simulation. The areas covered in this book are at once broader, for instance encompassing reviews of codon bias and biomedical imaging, and more specific, focused on what is often only the first step of systems biology, network construction.

Amid close-focus chapters, Jeremy Gunawardena's piece on 'Models in Systems Biology' is a welcome broad horizon. Addressing the 'parameter problem and the meanings of robustness' it brings perspective and clarity to a confused area of 'traditional' simulation-based computational systems biology. That there are problems with the multiplication of parameters is ably demonstrated by the following chapter where the 13 pages of main text are followed by 18 pages of appendix, primarily comprising the equations and parameters of the model presented. A machine-readable file in the biomodels database (Li *et al*., 2010; http://www.biomodels.net/database/) would have been a whole lot more useful.

This is a diverse more than a comprehensive book, but its core is the section on 'Biological Network Inference', a theme that spreads out into other sections: Networks inferred via text mining appear in the 'software' section and two of the chapters in the 'genomics' section concern constructing transcriptional networks using genome sequences and expression data. The approaches are varied, even encompassing phylogenetic reconstruction. I'm not convinced that this latter chapter, which clearly presents the niceties of rate variation in biological sequence evolution, is particularly suited to a book on systems biology. However its presence makes the important point that phylogenetic trees are a form of biological network with a substantial history and body of theory, which has largely been ignored by, and ignored, systems biology up to now.

For those whose interest in systems biology doesn't involve constructing networks, perhaps taking them 'off the shelf' at KEGG (Kanehisa *et al*., 2010), it is likely to be economically more sensible to download a chapter or two than buy this book. But even those uninterested in network construction can't avoid networks' pervasive presence in modern biology. So such a collection of network inference methods presents a challenge: do the questions asked of the resulting networks and the approaches used on them adequately account for the range of options and uncertainties that surrounds their construction, quite apart from real evolutionary variation in network structure (Knight & Pinney, 2009)? In simulation-based systems biology, uncertainty and change in network structure is rarely considered, the tools are not there to do so. I for one look forward to computational systems biologists providing such tools in the future. But those putting together books on the subject will need to find more informative titles if we're not to give up on sifting through the current morass of works labelled 'systems biology'.

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CHRISTOPHER G. KNIGHT
Faculty of Life Sciences
University of Manchester
Manchester, UK

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At the Helm: Leading Your Laboratory, 2nd edition. K. Barker. Cold Spring Harbor Laboratory Press. 2010. 372 pages. ISBN 9780879698669. Price $59 (hardback).

Read This Book BEFORE You Take The Helm

The second edition of the book, *At the Helm*: *Leading Your Laboratory*, like the first, offers a wealth of excellent advice for people starting a new career running a laboratory as well as useful advice for more established researchers. The book begins with advice on how to get a good start in a new position, beginning with the message that this is most likely to occur if you find an institution that fits your career goals. While this might seem obvious, when the job market is as tight as it is, many may be tempted to jump at the first offer they get, and this book highlights some of the many drawbacks that this might have from a career perspective. The introductory chapter also does a nice job of reviewing what can be expected from industry

vs. academia jobs and describes situations where the lines between the two, or at least the historical distinction between them (e.g. greater freedom in academia), are becoming less distinct.

The second chapter and the remaining first half of the book really focuses on developing and implementing a plan to run the laboratory at the outset, to ensure that new investigators hit the ground running. It starts by suggesting that new investigators develop a five-year plan for the future including contemplating how much funding you would like to have, and how large you would like your lab to be, as well as considering what you expect your life to be like outside of the laboratory (basically how do you see your personal life unfolding). There are hints about equipping your lab and ordering before you get to your new position, defining a leadership style once you get there, establishing a laboratory culture to set the tone for the laboratory as well as tips on how to establish priorities to ensure a successful, happy and productive laboratory.

A great deal of the second half of this book, and perhaps its greatest strength, is the discussion of the challenges and rewards of mentoring students in the laboratory. This is a topic that is applicable to investigators at all levels and one that many of us confront on a daily basis. Several chapters touch on this general topic from different angles and it is the one challenge that I think that most people are either ill prepared for or never fully appreciate when starting a laboratory. Specific topics include a general discussion of what a good mentor is, suggestions for training new personnel, outlining responsibilities of the principal investigator (PI), motivating laboratory personnel and maintaining communication with the lab. Each of these areas directly defines some aspect of mentoring and they are really critical elements of a successful laboratory. Anyone having difficulty in any one of these areas, whether they are a new investigator or not, would be well served to read this book for useful suggestions.

For all of these reasons I see a real value in this book, not just for offering helpful suggestions about how to start and maintain a career as the head of a laboratory, but also simply because it covers topics that people beginning their careers may never think of, but which if carefully thought about beforehand should greatly enhance their probability of success. While I recommend this book to both new and established PIs there are even sections about sabbaticals and how to wind down your lab at the end of a successful career), perhaps the best time to read it would be well before anyone begins their first job (be it in academia or industry). As such, I recommend that this book be given as a parting gift to graduate students or read in a journal club of post-docs as there is great advice on many topics to get researchers to start thinking about their job BEFORE they get one.

JEFF LEIPS
Department of Biological Sciences
University of Maryland
Baltimore, USA

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