

*Book review***Critical Reasoning (5th edition)**

By Jerry Cederblom and David W. Paulsen

464 pp, Wadsworth; Thomson Learning, Belmont CA, 2001, ISBN 0-534-51940-7 (pbk).

This well established book, subtitled “Understanding and Criticizing Arguments and Theories”, takes a broad and practical approach to critical reasoning, a vital transferable skill rarely overtly addressed in life sciences courses. However, this ability lies behind not only everyday activities such as analyzing the arguments encountered in newspaper articles, on the internet and in other media, but is also fundamental to successful science. This book provides applied techniques for interpreting and evaluating arguments using numerous, real-world examples.

This extremely comprehensive book is perhaps beyond the usual reading of science students and staff, but it contains much that is fundamental to the approach to scientific research and to the process of learning in a world of theory and hypothesis. With chapters that include

- The Anatomy of Arguments: Identifying Premises and Conclusions
- When Does the Conclusion Follow? A More Formal Approach to Validity
- Fallacies: Bad Arguments That Tend to Persuade
- “That Depends on What You Mean by.....”
- Arguments That Are Not Deductive
- Explanation and the Criticism of Theories
- Making Reasonable Decisions As an Amateur in a World of Specialists

The text caters for those interested in the critical analysis and examination of interpretations of data sets and the development and support of hypotheses and theories. Although many scientists and students will feel that they are already able to do this, this book provides the background necessary to ensure that this is done objectively and effectively. In particular, the authors provide a straight-forward, six-step procedure that helps you to decide whether to accept or reject any argument that you might encounter. Despite my lack of philosophical training, I found the text well structured and, providing you are willing to be selective in the sections that you read in detail, I found that I learnt a lot about my own thinking strategies and their strengths and weaknesses. All of the points raised are well supported by a glossary and there are exercises at the end of each chapter (with solutions given at the end of the book). Whilst not for the faint-hearted, this is a valuable text in the context of self-development in critical personal transferable skills.

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