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Book review

R.W. Scholz, *Environmental Literacy in Science and Society: From Knowledge to Decisions*, Cambridge University Press (2011), 631 pp., ISBN 978-0-521-19271-2 Hardback, ISBN 978-0-521-18333-8 Paperback

The book *Environmental Literacy in Science and Society: From Knowledge to Decisions* could be viewed as a collection of the life oeuvre of Roland Scholz, encompassing work and insights gained over the past 2 decades. He created a lucid and inspiring sourcebook in a smooth style; a treasury of information and a very useful heuristic tool. The idea behind this book has been the need for a sound theoretical and resource book in the field of environmental and sustainability science, including the human–environmental linkages as well as transdisciplinary research. Scholz coins the term environmental literacy, which in brief means “[...] the ability to appropriately read and to utilize environmental information, to anticipate rebound effects, and to adapt according to information about environmental resources and systems and their dynamics”.

This book holds so much content that you could easily lose your way in perspectives, concepts, postulates and frameworks for understanding complexity. However, the author acknowledges this and provides the reader with a ‘roadmap’ of his rationale to guide you in your reading. Each chapter starts with a brief overview and formulates the key questions that are addressed and ends in a paragraph key messages. Moreover, the chapters are rich in terms of historical and contemporary examples, practical cases, stories, and diagrams clarifying and supporting the text.

The first part of the book presents strong conceptual, theoretical, and philosophical underpinnings for the analysis to follow. There are several chapters addressing the relevant scientific disciplines and theories of biology, psychology, sociology, economics, and industrial ecology. Each of these chapters provides a unique perspective for the analysis of environmental literacy.

This book is a theoretical book with great value for academic research and teaching, but at the same time it also takes on a pragmatic approach. Through transdisciplinarity the book attempts to bridge theory and practice, and thereby provides several useful tools for decision-making. Moreover,

the Human–Environment System Framework introduced later in the book, is tested against exploratory practical case studies, lending the overall theoretical analysis a real-life character.

The HES Framework, based upon 7 postulates (complementarity, hierarchy, interference, feedback, decision, awareness, and environment-first), addresses the complexities within and between human and environmental systems. It serves as a heuristic tool for the investigation of the human–environment system interactions. The postulates make it possible to move from disciplinary to so called “disciplinary interdisciplinarity”; they provide a conceptual foundation for the HES framework.

Later chapters illustrate how the HES framework can be applied to different practical case studies. It becomes clear that the postulates help to analyse each case and facilitate a better understanding of the linkages between human and environmental systems. The HES Framework and the underlying postulates are demonstrated to be useful in enhancing our understanding of the practical cases and can help to uncover weaknesses of the strategies that were implemented. This analysis lends the book a very practical character as well, and gives a sense of how transdisciplinarity can take shape.

Roland Scholz succeeded in enhancing our awareness and understanding of complexity. He addresses and multi-analyses issues we tend to take for granted, like showing fish the water in which they swim, thus stimulating a multidisciplinary and integrative understanding of the human–environment nexus. In part IV, HES, Human–Environment Systems, are introduced. These complex human–environment systems can be better understood and anticipated through the use of a range of integrated modelling techniques, and require transdisciplinary management approaches. On the other hand, the writer acknowledges the fact that decisions are not an exact science and hold a great deal of irrationality. Still his book provides us with an analytical approach for understanding the complex interrelations from various points of view. Experience will learn whether this is a satisfactory method to facilitate decision makers, who often urge to reduce complexity in order to feel safe and be able to make their choices. Perhaps the idea of using the HES framework in transdisciplinary theory practice discourses, which is offered in the final chapters, may open new pathways.

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1462-9011/\$ – see front matter
doi:[10.1016/j.envsci.2011.12.009](https://doi.org/10.1016/j.envsci.2011.12.009)