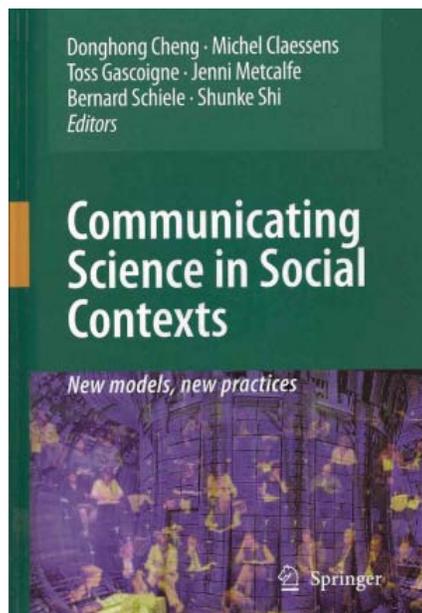


# Reviews

by Susan M Shirley



COMMUNICATING SCIENCE IN SOCIAL CONTEXTS: NEW MODELS, NEW PRACTICES. EDITED BY DONGHONG CHENG, MICHEL CLAESSENS, TOSS GASCOIGNE, JENNI METCALFE, BERNARD SCHIELE, AND SHUNKE SHI. BERLIN: SPRINGER; 2008. 322 PAGES. HARDCOVER \$199.00. ISBN 978-1-4020-8597-0, E-ISBN 987-1-4020-8598-7.

Communicating science is a big challenge in an era when well-established theoretical communication models now seem out of step with the social reality of the sciences. But the six editors of *Communicating Science in Social Contexts: New Models, New Practices* have taken the bull by the horns. They grouped its 18 chapters into Part 1 (“Revisiting Models”), Part 2 (“Crossing Boundaries”), and Part 3 (“Developing Strategies”) with the aim of improving the dialogue between the scientific community and the rest of society. The book was authored by 31 experts in science communication around the world. The editors and the authors are all members of the Public Communication of Science and Technology (PCST) Network, an international network of science communicators.

*Communicating Science in Social Contexts* is a valuable resource for science editors and communicators and for academic researchers who study aspects of PCST. In this book, one sees the abundance of models and practices related to science communication.

Chapter 1 contends that the introduction of the business model into science not only has led to the commercialization of science but has implications for science communication. “The community of science communicators might recognize here its new mission: to empower public opinion to recognize the exaggerated claims of private knowledge marketing,” the author concludes. In Chapter 2, the “gradient” and “stellar” models of science communication are explained. The gradient model implies that improving scientists’ communication skills and the public’s scientific literacy should allow for a better dialogue between science and society. In the stellar model, a scientist responsible for a breakthrough will inform a few journalists; the journalists’ subsequent reporting of the achievement, which may cause a chain reaction in the mass media (as more reports follow), “enlightens” the public.

Beyond Chapter 2, however, the models are not clear until Chapters 6 and 7 bail the reader out. Chapter 6 traces the history of the “deficit” model, in which “science is transmitted by experts to audiences perceived to be deficient in awareness

and understanding.” The author, Bernard Schiele, then discusses the replacement of the deficit model with the “contextual” model, which embraces the inputs of citizens in open dialogue with scientists.

In Chapter 7, Brian Trench argues that different science-communication models can coexist when the choices are explicit. He provides an analytic framework for science-communication models and recognizes dissemination, dialogue, and conversation as base models from which other variants evolve. It is an excellent chapter for readers confused by many science-communication models.

In Part 2, the reader crosses boundaries to music, Hollywood, and other sectors. The editors did exceptionally well in integrating these chapters. For example, the authors of Chapter 8 show how pop music can yield understanding of public images and visions of science.

In Chapter 10, David Kirby introduces a new category of science experts in Hollywood known as boundary spanners. Boundary spanners usually are not bound by a single scientific discipline and are perceived as scientific and filmmaking experts. They synthesize information from the culture of science, translate it into the culture of entertainers, and finally transform it into a finished cultural product on the screen. “For boundary spanners, success is achieved when what appears on the screen bears enough resemblance to scientific authenticity to satisfy both the scientific and the entertainment communities,” the author reveals.

Science communication is also shown to be an interdisciplinary field of inquiry in which researchers in sociology, psychology, history, political science, communication studies, and science-policy analysis are involved in PCST activities. Developing trust among researchers in those sectors and being willing to take risks are key features of the collaboration.

Part 2 of the book blends well with Part 3 and will be good for science communicators who wish to use different channels to enhance public understanding of science and technology. Among the strategies discussed are science advocacy and the creation of a regular forum dedicated to

knowledge brokering in which members of the scientific community and the public can meet and exchange information and experiences.

Chapter 13, by Toss Gascoigne, shows how scientists now are acting mainly to maintain or increase funding. The author identifies such tactics as conducting surveys and presenting the results to politicians as evidence of what their constituencies want. Perhaps knowing such tactics could help science editors be aware of publishing survey results that are intended to score political points.

In Chapter 15, Maja Horst identifies three models of communication between science and the public: diffusion, deliberation, and negotiation. Horst applies the models to a participatory consensus conference, a meeting of experts and laypeople to discuss and evaluate a particularly controversial technology.

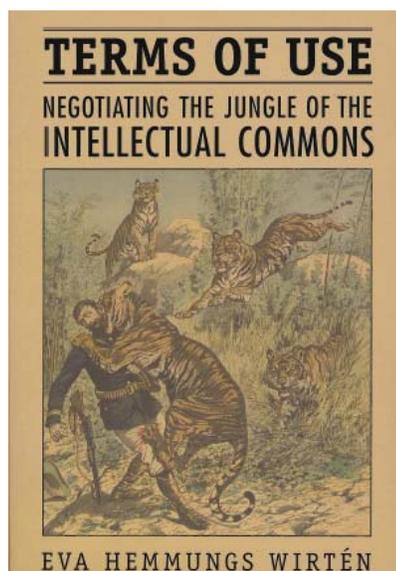
Steve Miller, in Chapter 16, examines changes in public communication of science from a top-down model to dialogue

and direct contact between scientists and the public. Jan Riise, in Chapter 18, highlights how science festivals and science cafés have proved to be excellent events for exchanging ideas.

This book will be useful for science editors and others involved in science communication or the study thereof, but it has limitations. First, the chapters in Part 1 do not blend well, and readers may be confused about the models discussed. Second, some chapters lack conclusions, which would be helpful to readers.

Overall, the book appears to serve its intended audience well. The editors have achieved their aim of introducing communication models and approaches to enhance science communication.

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TERMS OF USE: NEGOTIATING THE JUNGLE OF THE INTELLECTUAL COMMONS. EVA HEMMUNGS WIRTÉN. TORONTO: UNIVERSITY OF TORONTO PRESS; 2008. 206 PAGES. HARDCOVER \$70.00. ISBN: 978-0-8020-

The concept of the intellectual commons has been actively discussed in the intellectual-property arena since the mid 1990s and is perhaps most thoroughly described in Henry C Mitchell's 1995 work *The Intellectual Commons*. In *Terms of Use*, Eva Hemmungs Wirtén embraces Mitchell's concept of the intellectual commons as a "natural world of intellectual resources" that is subject to natural rights and adopts the jungle as a touchstone to examine the social development of the intellectual commons. The book is not without flaws and sometimes struggles to smooth out the connections between the disparate aspects of the history of the commons it examines; nevertheless, it provides a compact and readable overview of the social and legal history that has resulted in the recognition of the information commons and a frank assessment of the management strategies that have been applied to a variety of "commons" through the ages.

The introduction elucidates the book's objective of moving beyond a strict legal framework as a way of understanding the commons and delving into the social aspects of the construct. The introduction also effectively presents the leitmotif of the jungle, which is used both practically and metaphorically in Wirtén's analysis. Unfortunately, the book also begins struggling to find its footing here; it never fully clarifies the distinctions between the public domain and the information commons.

However, the book rights itself in the first chapter with an examination of the most traditional of commons: those based on land access. The primary focus is on 17th- and 18th-century England, where the Diggers and other groups fought against enclosure (the fencing in of what had been open fields), and detailed codes of law were developed around gleaning, the picking up of salvageable bits of food from fields that have already been harvested. There is certainly a legal aspect to this analysis, but the

relationship between the onset of enclosure and the onset of industrialization and the use of a commons as a tool for social engineering are clear. The public commons had provided a subsistence living to “commoners” who eked out a living from them, and enclosure forced these lower classes into labor. Wirtén also looks at England as a colonial power, assessing the colonizers’ attitude toward the land-use practices of indigenous peoples and again notes that land-use rules were a tool to maintain control over a class of people. She then returns to England and looks at the application of the concept of the commons in an urban setting. The jungle theme is at best tangential in the first chapter, but the ties to the natural world remain strong. Wirtén closes the chapter with a discussion of the information commons—a summary that might better serve as a conclusion to the book, although the history is interesting, and the assessment of the management of common land is critical for an understanding of the information commons.

It is in the second and third chapters that Wirtén most effectively brings the jungle into play. Focusing once again on England as a colonial power, she looks first at the use of jungle plants as a pharmaceutical resource and then at the use of animals (whether in the jungle or on the African plains) as an entertainment resource. The examination of plants and plant materials as a commons in a colonial world provides perhaps the most striking parallels to the copyright regimes of today and presages current efforts to formalize a biotechnology commons. In examining animals and animal products as a commons, Wirtén focuses on Victorian England, where dioramas and taxidermy became the stuff of public entertainment and spawned great interest in the use of

animal products as household furnishings. This section looks briefly at early patents on animal products—an examination that, sadly, is not taken to its fullest extent. The chapter goes on to look at the jungle and animal paintings of Rousseau, and this leads to a useful discussion of copyfraud, the application of copyright to materials in the public domain.

In the final chapter, Wirtén returns to the public domain and makes a case study of Kipling’s *The Jungle Book*, which was adapted into an animated film by the Walt Disney Company in 1967. She pointedly observes that, were the current United States copyright laws, which Disney aggressively lobbied for, in place in the early 1960s, *The Jungle Book* would not have been in the public domain and therefore would not have been available for Disney to adapt. The irony is stunning. Wirtén also examines the case of the song “The Lion Sleeps Tonight”, which was derived from a traditional African song and later taken up by Disney for *The Lion King*. The individual stories are fascinating and put a human face on the legal debate.

Wirtén’s book brings together a lot of information in a small space and provides an excellent overview of a broad spectrum of commons, the management of which holds lessons for the management of the intellectual commons. Although the book is disjointed at times, the individual vignettes are all interesting, and the book is a good resource for those looking for a broad overview of the subject.

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