

Personal computers are now appliances, like toasters and microwave ovens, and software has become just another component in their mass production. Abramson himself hits the nail on the head when he says, “users just want software that works” (p. 45). When the software quits working, things will change.

BRUCE EPPERSON

Bruce Epperson is a lawyer and transportation planner who works in the Fort Lauderdale, Florida, area.

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**Code: Collaborative Ownership and the Digital Economy.**

Edited by Rishab Aiyer Ghosh. Cambridge, Mass.: MIT Press, 2005.  
Pp. x+345. \$37.50.

In this compelling collection of essays, Rishab Aiyer Ghosh has gathered together fourteen scholars from an array of disciplines to make a single case: since the late 1990s, information technologies, and the internet in particular, have helped drive the rise of the collaborative, peer-to-peer production of information goods. The authors suggest that this new mode can be seen most clearly in the open-source software movement, in the music industry, and in biotechnology. As several of them point out, the last ten years have witnessed the rise of Linux, a software system that competes head-to-head in the marketplace with Microsoft and Apple, but one that was created by several thousand individual, unpaid programmers working together online. The Linux case, they argue, is but the most glaring example of an increasingly common mode of manufacture and one that is already challenging not only our intellectual property regimes, but our conceptions of the nature of labor and economic exchange.

Within the field of new media studies, these arguments are familiar. As Ghosh points out, most of the essays originated as papers first presented at conferences in 2001 and 2003. Since that time, scholars have published extensive analyses of the open-source movement (Berkeley political scientist Stephen Weber’s *The Success of Open Source* [2004] being arguably the most thorough) and of the relationship between peer-to-peer production and intellectual property law (with Stanford law professor Lawrence Lessig’s last two volumes—*The Future of Ideas* [2001] and *Free Culture* [2004]—the most widely cited). Yet Ghosh’s volume does offer a valuable introduction to the issues at stake, an engagingly multidisciplinary approach, and a particularly effective framing of dominant positions.

The book is divided into three sections. The first offers six essays that contextualize technology-based peer production culturally and historically. Anthropologists Marilyn Strathern, James Leach, and Fred Myers examine indigenous cultures with strong traditions of collaborative cultural work and exchange. By exploring these systems, they convincingly demonstrate that cultural economies need not be based on conceptions of individual

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labor and individual property rights. Communications theorist Boema Boetang and ethnomusicologist Anthony Seeger, on the other hand, point to the ways in which Western industries are currently deploying intellectual property law so as to capture indigenous forms of culture and knowledge for commercial purposes. In their examples, both Western legal frameworks and the corporations that deploy them emerge as the enemies of cultures otherwise built around free intellectual exchange.

The authors of the book's third section, which focuses on patterns of property ownership under conditions of collective production, work within a similar framework. Duke law professor James Boyle, for instance, suggests that collaborative production can be thought of as the work of an intellectual commons, a commons whose products and processes large corporations are currently working to enclose. In Boyle's argument, as in Seeger's and Boetang's, culture seems to have always been collaborative; it is industry and law, and the forces of rationalization generally, that threaten to rein culture in, and, with it, forms of innovation on which new technological and economic development depend.

These arguments have gained particular force lately, as industries from entertainment to pharmaceuticals have sought to patent, copyright, and otherwise lock down information goods. Yet they do little to illuminate the fusion of the cultural, the technological, and the economic that is taking place in cyberspace. For that, the book's second section offers an exceptionally strong set of essays on the mechanisms of collaboration, including a pared-down version of Yochai Benkler's now well-known analysis of Linux, Ghosh's own model of what he calls "cooking-pot markets," and James Love and Tim Hubbard's analysis of how one might distribute the rewards of collective production. These essays, together with Paul David's historical analysis of the rise of collaboration in science and Philippe Aigrain's forward-looking attempt to imagine a property regime that guaranteed rather than restricted the use-rights of information goods, make it clear that information technology will continue to amplify already existing forms of cultural and professional collaboration.

For historians of technology, then, the book offers a well-selected introduction to a complicated shift in the relationship between economic and cultural production. To the extent that it offers new models of that shift, it also offers useful analytical tools with which to rethink the role of technology in shaping economic and cultural change.

FRED TURNER

Dr. Turner is assistant professor of communication at Stanford University and the author of *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism*, forthcoming from the University of Chicago Press.